SPERRY RAND
UNIVAC
DPD UTICA-ILION

# SERVICING DOCUMENT MANUAL INDEX

MANUAL TITLE: CARD PUNCH

10/31/69

MANUAL INDEX NO.

| PREFIX | TYPE NO. | SIZE | IND. VAR. |
|---|---|---|---|
| M | 0604 | B | 01 |

TYPE NO.: 0604-00

SERIAL NO.: 636

SYSTEM NO.: 92/93/9400

SERIAL NO.:

CONTENTS

| TAB DIVIDER NO. | SECTION INDEX TITLE | REQ'D. | TYPE NUMBER VARIATIONS | SD SECTION INDEX NUMBER TYPE NO. | SD SECTION INDEX NUMBER IND. VAR. | INDEX REVISION | TAB DIVIDER NO. | SECTION INDEX TITLE | REQ'D. | TYPE NUMBER VARIATIONS | SD SECTION INDEX NUMBER TYPE NO. | SD SECTION INDEX NUMBER IND. VAR. | INDEX REVISION |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 00 | Unit Traveler & EIR Control Listing | X | All | - | - | - | | | | | | | |
| 01 | Logic Drawings - 80 Column | X | 00-01 | 0604 | 1 | B9 | | | | | | | |
| | Logic Drawings - 90 Column | | 02-03 | 0604 | 5 | | | | | | | | |
| 02 | Reference Drawings | X | 00-01 | 0604 | 2 | B10 | | | | | | | |
| 03 | Printed Circuit Boards | X | 00-01 | 0604 | 3 | 09 | | | | | | | |
| 0C | Test Routines - 80 Column | X | 00-01 | 92/9300 | 14 | A2 | | | | | | | |
| | Test Routines - 90 Column | | 02-03 | 92/9300 | 17 | | | | | | | | |
| | FED. Maintenance Handbooks (00-03) HB 1747 | X | | | | | | | | | | | |

# UNIT TRAVELER

| DATE OF BASIC REV. LEVEL | TYPE NO. BASIC | TYPE NO. VAR | SYSTEM SERIAL NO. | UNIT SERIAL NO. |
|---|---|---|---|---|
| APR 13 /70 | 0604 00 | 00 | | 636 |

## MODULE CONTROL SECTION

| MODULE NUMBER | MOD TYPE | SERIAL NUMBER | REV. | LIFE NO. | REV. | LIFE NO. | REV. | LIFE NO. | REV. | LIFE NO. | REV. | LIFE NO. | REV. | LIFE NO. | REV. | LIFE NO. | Q.C. LIFE NO. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3842948 | V | 100523 | J | | K | | L | | M | 2660 | N | | | | | | |

| E.I.R. NO. | EFF. | D.D.A. NO. | ASSY LIFE NO. | TEST LIFE NO. | PROD. CTL. LIFE NO. | QUAL. CTL. LIFE NO. | F.E.D. LIFE NO. | E.I.R. DESCRIPTION |
|---|---|---|---|---|---|---|---|---|
| C11601-1C | | | | | | | | Add Connector to Cable Assy. |
| C11577-1C | | | | | | | | Manfacturing Convenience |

REMARKS

| APPROVALS | | | | DOC / RECORDS | |
|---|---|---|---|---|---|
| PRODUCTION | DATE | Q.C. | DATE | DATE REC'D. | 5-20-70 |
| | | | | SIGNATURE | |

UD4-5578A

| E.I.R. NO. | EFF. | D.D.A. NO. | ASSY. LIFE NO. | TEST LIFE NO. | PROD. CTL. LIFE NO. | QUAL. CTL. LIFE NO. | F.E.D. LIFE NO. | E.I.R. DESCRIPTION |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |
| REMARKS | | | | | | | | |
| | | | | | | | | |
| REMARKS | | | | | | | | |
| | | | | | | | | |
| REMARKS | | | | | | | | |
| | | | | | | | | |
| REMARKS | | | | | | | | |
| | | | | | | | | |
| REMARKS | | | | | | | | |
| | | | | | | | | |
| REMARKS | | | | | | | | |
| | | | | | | | | |
| REMARKS | | | | | | | | |
| | | | | | | | | |
| REMARKS | | | | | | | | |
| | | | | | | | | |
| REMARKS | | | | | | | | |
| | | | | | | | | |
| REMARKS | | | | | | | | |
| | | | | | | | | |
| REMARKS | | | | | | | | |
| | | | | | | | | |
| REMARKS | | | | | | | | |
| | | | | | | | | |
| REMARKS | | | | | | | | |
| | | | | | | | | |
| REMARKS | | | | | | | | |
| | | | | | | | | |
| REMARKS | | | | | | | | |
| | | | | | | | | |
| REMARKS | | | | | | | | |
| | | | | | | | | |
| REMARKS | | | | | | | | |

## FEATURE CONTROL SECTION

| FEATURE NO. | LIFE NO. | FEATURE NO. | LIFE NO. | FEATURE NO. | LIFE NO. | FEATURE NO. | LIFE NO. |
|---|---|---|---|---|---|---|---|
| F0875-00 | | | | | | | |
| F0945-00 | | | | | | | |
| F0945-01 | | | | | | | |
| F1046-00 | | | | | | | |
| F1046-01 | | | | | | | |
| Fo/233-02 Burner Power Cbl | | | | | | | |

CUSTOMER NAME | ORDER NO.

ADDITIONAL ASSY. SERIAL NO.

| DESC. | SER. | DESC. | SER. | DESC. | SER. | DESC. | SER. |
|---|---|---|---|---|---|---|---|
| DESC. | SER. | DESC. | SER. | DESC. | SER. | DESC. | SER. |

0604

UD4-5578B

# UNIVAC UTICA / ILION MANUFACTURING ENGINEERING

MFG. WK. 07

## ROW PUNCH E.I.R CONTROL LISTING TYPE 0604

ME - 43 R1

| E.I.R. NO. | EFF. | TYPE VAR. | D.D.A. NO. | INDEX LEVEL | DESCRIPTION | INCORP. POINT | SOME PREV. | EST. DATE E.I.R. AVAIL. TO PROD. | ACTUAL DATE AVAIL. TO PROD. | F.C.O. NO. | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|
| FOLLOWING EIRS ADDED | | | 4/21/67 | | | | | | | | |
| C9325-1 | C | | | | Dust & Lint causing false Jam B & A | 101 | | | | | |
| H18344-1 | C | 00-01 | | | I/O cables changed to use in compact arrange | 101 | | | | | |
| FOLLOWING EIRS ADDED | | | 5/26/67 | | | | | | | | |
| C9582-1 | C | | | | Release PPD for correct Material | 101 | | | | | |
| H18391-1A | C | 00-01 | | | Patch card replacement for A54 | 101 | | | | | |
| FOLLOWING EIRS ADDED | | | 6/9/67 | | | | | | | | |
| H18334-1 | C | 00-01 | | | I/O cables changed for more compact arrangement | 101 | | | | | |
| H18384-1 | C | 00-01 | | | Change design of 6DS5 to clarify function | 101 | | | | | |
| H18391-1 | C | 00-01 | | | Patch card replacement for Board A54 | 101 | | | | | |
| NO EIRS ADDED | | 6/16/67 | | | | | | | | | |
| NO EIRS ADDED | | 6/23/67 | | | | | | | | | |
| NO EIRS ADDED | | 6/30/67 | | | | | | | | | |
| NO EIRS ADDED | | 7/7/67 | | | | | | | | | |
| NO EIRS ADDED | | 7/14/67 | | | | | | | | | |
| NO EIRS ADDED | | 7/21/67 | | | | | | | | | |
| NO EIRS ADDED= | | 8/11/67 | | | | | | | | | |
| NO EIRS ADDED | | 8/18/67 | | | | | | | | | |
| NO EIRS ADDED | | 8/25/67 | | | | | | | | | |
| NO EIRS ADDED | | 9/1/67 | | | | | | | | | |
| FOLLOWING EIRS ADDED | | | 9/8/67 | | | | | | | | |
| H18669-2 | C= | | | | Inhibit setting offline during initial select | 101 | | | | | |
| NO EIRS ADDED | | 9/15/67 | | | | | | | | | |
| NO EIRS ADDED | | 9/22/67 | | | | | | | | | |
| FOLLOWING EIRS ADDED | | | 9/29/67 | | | | | | | | |
| H18991-3 | C | 00-03 | | | Rev. contrl panel harness running list | 101 | | | | | |
| H18991-4 | E | 02-03 | | | Corrected reference in field to agree withlist | 278 | | | | | |
| NO EIRS ADDED | | 10/6/67 | | | | | | | | | |
| NO EIRS ADDED | | 10/13/67 | | | | | | | | | |
| NO EIRS ADDED | | 10/20/67 | | | | | | | | | |
| NO EIRS ADDED | | 10/27/67 | | | | | | | | | |
| FOLLOWING EIRS ADDED | | | 11/3/67 | | | | | | | | |
| H19038-1 | C | 00-01 | | | Corrected quantity of B54B1 printed circuitassy | 101 | | | | | |
| H19039-1 | C | 02-03 | | | Error corrections; add one find 8 on LM | N/A | | | | | 90 Col. not in prod. |

# UNIVAC UTICA / ILION MANUFACTURING ENGINEERING

MFG. WK. 07

## ROW PUNCH E.I.R CONTROL LISTING

ME - 43 RI

| E.I.R. NO. | EFF. | TYPE VAR. | D.D.A. NO. | INDEX LEVEL | DESCRIPTION | INCORP. POINT | SOME PREV. | EST. DATE E.I.R. AVAIL. TO PROD. | ACTUAL DATE AVAIL. TO PROD. | F.C.O. NO. | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|
| NO EIRS ADDED | | | 11/10/67 | | | | | | | | |
| FOLLOWING EIRS ADDED | | | 11/17/67 | | | | | | | | |
| H18669-3 | D | 00-01 | | | Delete VSRQ;VCLRA;Delete VSAT; Add VSTR | 157 | X | | | 9300-63 | |
| H18991-2 | C | 00-01 | | | Removed 5 extra capacitators;cause spikes | 101 | | | | | |
| NO EIRS ADDED | | | 11/22/67 | | | | | | | | |
| NO EIRS ADDED | | | 12/1/67 | | | | | | | | |
| NO EIRS ADDED | | | 12/8/67 | | | | | | | | |
| FOLLOWING EIRS ADDED | | | 12/15/67 | | | | | | | | |
| H18971-2 | C | | | | Revise I/O interface cable assy. | 101 | | | | | |
| NO EIRS ADDED | | | 12/22/67 | | | | | | | | |
| NO EIRS ADDED | | | 12/29/67 | | | | | | | | |
| FOLLOWING EIRS ADDED | | | 1/5/68 | | | | | | | | |
| C9904-1 | C | | | | Correct Switch | 101 | | | | | |
| NO EIRS ADDED | | | 1/12/68 | | | | | | | | |
| NO EIRS ADDED | | | 1/19/68 | | | | | | | | |
| NO EIRS ADDED | | | 1/26/68 | | | | | | | | |
| NO EIRS ADDED | | | 2/2/68 | | | | | | | | |
| FOLLOWING EIRS ADDED | | | 2/9/68 | | | | | | | | |
| C10039-1 | B= | | | | Redesign to eliminate rejection | N/A | | 1/15/69 | | | |
| H19047-1A | D | | | | Cable Moved | 200 | X | 3/8/68 | | 9300-185 | |
| FOLLOWING EIRS ADDED | | | 2/15/68 | | | | | | | | |
| H19276-1 | D | 02,03 | | | A spike condition exists MOD "V" to Rev. "C" | N/A | | | | | 90 Col not in production |
| C10100-1 | D | | | | Mandatory change to Mod. "V" | 201 | X | 3/8/68 | | 9300-118 | |
| C10066-2 | C | | | | Update spare parts bills | N/A | | | | | |
| NO EIRS ADDED | | | 2/23/68 | | | | | | | | |
| FOLLOWING EIRS ADDED | | | 3/1/68 | | | | | | | | |
| C10206-2 | C | | | | Lifts stop order | N/A | N/A | 5/1/68 | N/A | N/A | |
| FOLLOWING EIRS ADDED | | | 3/8/68 | | | | | | | | |
| H19601-4 | E | 00-01 | | | Release component assys & specification | 278 | X | 6/15/68 | | 9300-127 | |
| C10262-1 | D | | | | Mandatory Logic Change | 200 | X | | | 9300-126 | |
| NO EIRS ADDED | | | 3/15/68 | | | | | | | | |
| NO EIRS ADDED | | | 3/22/68 | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |

# UNIVAC UTICA / ILION MANUFACTURING ENGINEERING

MFG. WK. 07

## ROW PUNCH E.I.R CONTROL LISTING TYPE 0604

ME - 43 RI

| E.I.R. NO. | EFF. | TYPE VAR. | D.D.A. NO. | INDEX LEVEL | DESCRIPTION | INCORP. POINT | SOME PREV. | EST. DATE E.I.R. AVAIL. TO PROD. | ACTUAL DATE AVAIL. TO PROD. | F.C.O. NO. | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|
| FOLLOWING EIRS ADDED | | | 3/29/68 | | | | | | | | |
| C10125-1 | D | | | | Mandatory Logic change to Module "V" | 219 | | | | 9300-128 | |
| NO EIRS ADDED | | | 4/5/68 | | | | | | | | |
| NO EIRS ADDED | | | 4/12/68 | | | | | | | | |
| NO EIRS ADDED | | | 4/19/68 | | | | | | | | |
| NO EIRS ADDED | | | 4/26/68 | | | | | | | | |
| NO EIRS ADDED | | | 5/3/68 | | | | | | | | |
| FOLLOWING EIRS ADDED | | | 5/10/68 | | | | | | | | |
| C10391-1 | D | | | | Suppress noise on all D.C. voltages | 278 | X | 10/16/68 | | 9300-175 | |
| NO EIRS ADDED | | | 5/17/68 | | | | | | | | |
| NO EIRS ADDED | | | 5/24/68 | | | | | | | | |
| NO EIRS ADDED | | | 5/31/68 | | | | | | | | |
| NO EIRS ADDED | | | 6/7/68 | | | | | | | | |
| NO EIRS ADDED | | | 6/14/68 | | | | | | | | |
| NO EIRS ADDED | | | 6/21/68 | | | | | | | | |
| NO EIRS ADDED | | | 6/28/68 | | | | | | | | |
| NO EIRS ADDED | | | 7/5/68 | | | | | | | | |
| NO EIRS ADDED | | | 7/12/68 | | | | | | | | |
| NO EIRS ADDED | | | 7/19/68 | | | | | | | | |
| NO EIRS ADDED | | | 7/26/68 | | | | | | | | |
| NO EIRS ADDED | | | 8/2/68 | | | | | | | | |
| NO EIRS ADDED | | | 8/9/68 | | | | | | | | |
| NO EIRS ADDED | | | 8/16/68 | | | | | | | | |
| NO EIRS ADDED | | | 8/23/68 | | | | | | | | |
| NO EIRS ADDED | | | 8/30/68 | | | | | | | | |
| FOLLOWING EIRS ADDED | | | 9/6/68 | | | | | | | | |
| H19601-9 | A/E | | | | Revise I/O interface channel | 278 | X | | | | |
| NO EIRS ADDED | | | 9/13/68 | | | | | | | | |
| NO EIRS ADDED | | | 9/20/68 | | | | | | | | |
| NO EIRS ADDED | | | 9/27/68 | | | | | | | | |
| NO EIRS ADDED | | | 10/4/68 | | | | | | | | |
| FOLLOWING EIRS ADDED | | | 10/18/68 | | | | | | | | |
| C10787-7 | C | | | | Replace existing nameplate with new nameplate | 359 | | 3/7/69 | | | |

# UNIVAC UTICA / ILION MANUFACTURING ENGINEERING

MFG. WK. 07

## ROW PUNCH E.I.R CONTROL LISTING

TYPE 0604

| E.I.R. NO. | EFF. | TYPE VAR. | D.D.A. NO. | INDEX LEVEL | DESCRIPTION | INCORP. POINT | SOME PREV. | EST. DATE E.I.R. AVAIL. TO PROD. | ACTUAL DATE AVAIL. TO PROD. | F.C.O. NO. | REMARKS ME-43 RI |
|---|---|---|---|---|---|---|---|---|---|---|---|
| FOLLOWING EIRS ADDED | | | 10/25/68 | | | | | | | | |
| C10891-1 | C | | | | Correct Resistor Value on Probe Propagation | 329 | X | | | | |
| C10917-1A | D | | | | Change Resistors on P. C. Boards | 329 | X | 1/3/69 | | 92-108 | |
| C10798-1 | C | | | | To Correct Error | 101 | | 1/3/69 | | | |
| NO EIRS ADDED | | | 11/1/68 | | | | | | | | |
| NO EIRS ADDED | | | 11/8/69 | | | | | | | | |
| NO EIRS ADDED | | | 11/15/68 | | | | | | | | |
| FOLLOWING EIRS ADDED | | | 11/22/68 | | | | | | | | |
| C11014-1 | D | | | | Printed Circuit Terminators are Incorrect | 305 | | 1/3/69 | | 93-225 | |
| NO EIRS ADDED | | | 11/29/68 | | | | | | | | |
| NO EIRS ADDED | | | 12/6/68 | | | | | | | | |
| FOLLOWING EIRS ADDED | | | 12/13/68 | | | | | | | | |
| C11014-2 | D | | | | Printed Circuit Terminators are Incorrect | 305 | | | | 93-225 | |
| NO EIRS ADDED | | | 12/20/68 | | | | | | | | |
| FOLLOWING EIRS ADDED | | | 12/27/68 | | | | | | | | |
| H18386-23 | E | 00 & 01 | | | Rev of Test Spec, Codedit & Card Deck for 80 Col Row Punch | 234 | | | | 92-102<br>93-125 | |
| H18386-39 | E | 00 - 03 | | | Rev of Test Spec for 80 & 90 Column Row Punch | 280 | | | | 92-129<br>93-172 | |
| H18386-59 | E | 00 - 03 | | | Rev of Test Spec for 80 7 90 Column Row Punch | 331 | X | | | 92-166<br>93-214 | |
| NO EIRS ADDED | | | 1/3/69 | | | | | | | | |
| NO EIRS ADDED | | | 1/10/69 | | | | | | | | |
| NO EIRS ADDED | | | 1/17/69 | | | | | | | | |
| NO EIRS ADDED | | | 1/24/69 | | | | | | | | |
| NO EIRS ADDED | | | 1/31/69 | | | | | | | | |
| NO EIRS ADDED | | | 2/7/69 | | | | | | | | |
| NO EIRS ADDED | | | 2/14/69 | | | | | | | | |
| NO EIRS ADDED | | | 2/21/69 | | | | | | | | |
| FOLLOWING EIRS ADDED | | | 2/28/69 | | | | | | | | |
| C11222-1 | D | | | | Release new artwork & Assy; Mod. "V" Rev "L" | 461 | | 1/2/70 | 8/28/69 | 93-337<br>93-336 | |
| NO EIRS ADDED | | | 3/7/69 | | | | | | | | |
| NO EIRS ADDED | | | 3/14/69 | | | | | | | | |
| NO EIRS ADDED | | | 3/21/69 | | | | | | | | |
| NO EIRS ADDED | | | 3/28/69 | | | | | | | | |
| NO EIRS ADDED | | | 4/4/69 | | | | | | | | |
| NO EIRS ADDED | | | 4/11 69 | | | | | | | | |

# UNIVAC UTICA / ILION MANUFACTURING ENGINEERING

MFG. WK. 07

## E.I.R CONTROL LISTING

0604

ME - 43 RI

| E.I.R. NO. | EFF. | TYPE VAR. | D.D.A. NO. | INDEX LEVEL | DESCRIPTION | INCORP. POINT | SOME PREV. | EST. DATE E.I.R. AVAIL. TO PROD. | ACTUAL DATE AVAIL. TO PROD. | F.C.O. NO. | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|
| NO EIRS ADDED | | | 4/18/69 | | | | | | | | |
| NO EIRS ADDED | | | 4/25/69 | | | | | | | | |
| FOLLOWING EIRS ADDED | | | 5/1/69 | | | | | | | | |
| C11283-1 | C | | | | Release new connector design | 527 | | 10/17/69 | | | |
| FOLLOWING EIRS ADDED | | | 5/9/69 | | | | | | | | |
| C11283-2 | C | | | | Rel. new conn. design for 0604 punch | 527 | | 10/17/69 | | | |
| NO EIRS ADDED | | | 5/16/69 | | | | | | | | |
| NO EIRS ADDED | | | 5/23/69 | | | | | | | | |
| NO EIRS ADDED | | | 5/30/69 | | | | | | | | |
| NO EIRS ADDED | | | 6/6/69 | | | | | | | | |
| NO EIRS ADDED | | | 6/13/69 | | | | | | | | |
| FOLLOWING EIRS ADDED | | | 6/20/69 | | | | | | | | |
| C11418-2 | C | | | | Module "V" to Rev. M | 466 | | 1-2-70 | 7-12-69 | | Release F1174 for M |
| NO EIRS ADDED | | | 6/26/69 | | | | | | | | |
| NO EIRS ADDED | | | 7/4/69 | | | | | | | | |
| NO EIRS ADDED | | | 7/11/69 | | | | | | | | |
| NO EIRS ADDED | | | 7/18/69 | | | | | | | | |
| FOLLOWING EIRS ADDED | | | 7/25/69 | | | | | | | | |
| C11601-1 | C | | | | Add the connector to cable assy. | | | | | | |
| NO EIRS ADDED | | | 8/1/69 | | | | | | | | |
| NO EIRS ADDED | | | 8/15/69 | | | | | | | | |
| NO EIRS ADDED | | | 8/22/69 | | | | | | | | |
| FOLLOWING EIRS ADDED | | | 8/29/69 | | | | | | | | |
| C11536-1 | C | | | | Error Correction | 542 | | 1-16-70 | | | |
| NO EIRS ADDED | | | 9/5/69 | | | | | | | | |
| NO EIRS ADDED | | | 9/12/69 | | | | | | | | |
| NO EIRS ADDED | | | 9/19/69 | | | | | | | | |
| NO EIRS ADDED | | | 9/26/69 | | | | | | | | |
| NO EIRS ADDED | | | 10/3/69 | | | | | | | | |
| FOLLOWING EIRS ADDED | | | 10/10/69 | | | | | | | | |
| C11577-7 | C | | | | Manufacturing Convenience | | | | | | |
| NO EIRS ADDED | | | 10/17/69 | | | | | | | | |
| NO EIRS ADDED | | | 10/24/69 | | | | | | | | |
| NO EIRS ADDED | | | 10/31/69 | | | | | | | | |

# UNIVAC UTICA/ILION MANUFACTURING ENGINEERING

MFG. WK. 07

## ROW PUNCH E.I.R CONTROL LISTING TYPE 0604

ME-43 R1

| E.I.R. NO. | EFF. | TYPE VAR. | D.O.A. NO. | INDEX LEVEL | DESCRIPTION | INCORP. POINT | SOME PREV. | EST. DATE E.I.R. AVAIL. TO PROD. | ACTUAL DATE AVAIL. TO PROD. | F.C.O. NO. | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|
| NO EIRS ADDED | | | 11/7/69 | | | | | | | | |
| NO EIRS ADDED | | | 11/14/69 | | | | | | | | |
| NO EIRS ADDED | | | 11/21/69 | | | | | | | | |
| NO EIRS ADDED | | | 11/28/69 | | | | | | | | |
| NO EIRS ADDED | | | 12/5/69 | | | | | | | | |
| NO EIRS ADDED | | | 12/12/69 | | | | | | | | |
| NO EIRS ADDED | | | 12/19/69 | | | | | | | | |
| NO EIRS ADDED | | | 12/26/69 | | | | | | | | |
| NO EIRS ADDED | | | 1/2/70 | | | | | | | | |
| NO EIRS ADDED | | | 1/9/70 | | | | | | | | |
| NO EIRS ADDED | | | 1/16/70 | | | | | | | | |
| NO EIRS ADDED | | | 1/23/70 | | | | | | | | |
| NO EIRS ADDED | | | 1/30/70 | | | | | | | | |
| NO EIRS ADDED | | | 2/6/70 | | | | | | | | |
| NO EIRS ADDED | | | 2/13/70 | | | | | | | | |
| NO EIRS ADDED | | | 2/20/70 | | | | | | | | |
| NO EIRS ADDED | | | 2/27/70 | | | | | | | | |
| NO EIRS ADDED | | | 3/6/70 | | | | | | | | |
| NO EIRS ADDED | | | 3/13/70 | | | | | | | | |
| NO EIRS ADDED | | | 3/20/70 | | | | | | | | |
| FOLLOWING EIRS ADDED | | | 3/27/70 | | | | | | | | |
| C12247-1 | C | | | | Logic change to Mod. "V" from M to "N" | 466 | | | | | F1174-00 |
| NO EIR ADDED | | | 4/3/70 | | | | | | | | |
| NO EIRS ADDED | | | 4/10/70 | | | | | | | | |
| NO EIRS ADDED | | | 4/17/70 | | | | | | | | |
| NO EIRS ADDED | | | 4/24/70 | | | | | | | | |
| NO EIRS ADDED | | | 5/1/70 | | | | | | | | |
| NO EIRS ADDED | | | 5/8/70 | | | | | | | | |
| NO EIRS ADDED | | | 5/15/70 | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |

# SERVICING DIAGRAM SECTION INDEX

INDEX TITLE: PUNCH LOGICS

INDEX NUMBER — BASIC TYPE NO: 0604 | INDEX VAR. NO.: 1 | INDEX VAR. REV.: B | SHEET 1 OF 2

TYPE NO. VARIATION USAGE

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 00 | | | | | | | |
| 01 | | | | | | | |

| L/M | SHEET | DOCUMENT NUMBER | TITLE | DOCUMENT REVISION LEVEL 1 2 3 4 5 6 7 8 9 10 |
|---|---|---|---|---|
| - | - | 3842296 | Logic & Wiring Index | A B B D F G H L M N |
| - | - | 3842950 | Block Diagram-Punch Control Unit | - - - - - - - - - - |
| - | - | 3842951 | Timing Chart-Read Buffer Seq. | - - - - - - - - - - |
| - | - | 3842952 | Timing Chart-Load Buffer | - - - - - - - - - - |
| - | - | 3842953 | Channel Int'fce Connector-Dest | - - - - A A A A A A |
| - | - | 3842954 | Channel Int'fce Connector-Orig. | - - - A B B B B B B |
| - | 1 | 3842955 | Interface Receivers | - - - - A A A B B B |
| - | 2 | 3842955 | " " | A A A A A |
| - | - | 3842956 | Select Dr. & Int'fce Drivers | - A A A B B B B C C |
| - | - | 3842957 | Bus In | - - - - A A A A A A |
| - | - | 3842958 | Input Data Gates-Bits 0-3 | - - - - - - - - - - |
| - | - | 3842959 | Input Data Gates-Bits 4-7 | - A A A A A A A A A |
| - | - | 3842960 | Bus In Parity Generator | - - - - - - - - - - |
| - | - | 3842961 | Bus Out Parity Check | - A A A A A A A A A |
| - | - | 3842962 | Device Add Comp. & Patch Cards | - A A A B B B B B B |
| - | - | 3842963 | Select Out, Operational In | - - A B B C C C D D |
| - | - | 3842964 | Initial Selection&Input Bus Ctl | - A A A A B B B B B |
| - | - | 3842965 | Address In, Status In Test Func. | - - - A A A A B B B |
| - | - | 3842966 | Start Reset, Invalid Function | - - A A A B B C C C |
| - | - | 3842967 | Status Control FF's | - - A A A A A A A A |
| - | - | 3842968 | Status Flip-Flops | - A A B B C C C C C |
| - | - | 3842969 | Function Registers | - A A A A A A B B B |
| - | - | 3842970 | Data Controls & Request In | - A A A A A A A A A |
| - | - | 3842971 | Buffer Unload-Load Sequence | - A A A A A A A A A |
| - | - | 3842972 | Data Register Controls | - A A B B B B B B B |
| - | - | 3842973 | Clutch, Motor Controls | - A A B C C C C C C |
| - | - | 3842974 | Jam Detection, Stacker Select. | - - A A A B B B B B |
| - | - | 3842975 | Punch Internal Connectors | - - - - A A A A A A |
| - | - | 3842976 | Cycle Ctr. Punch Drvs. Read Prb | - A A A A A A B C C |
| - | - | 3842977 | Row Counter | - - - - - - - A B B |
| - | - | 3842978 | Hole Count Controls | A B B B B B B B C C |
| - | - | 3842979 | Hole Counters | - A A A A A A A B B |
| - | - | 3842980 | Punch RF Data & Shift Controls | - - - - - - A A B B |
| - | - | 3842981 | Data Register Bits 0-1 | - A A A A A A A A A |
| - | - | 3842982 | Data Register Bits 2-3 | - A A A A A A A A A |

APPROVALS

| FED | DATE | MFG. ENG. | DATE | DESIGN ENG | DATE |
|---|---|---|---|---|---|
| | | | | | |

UD4 - 5086 R1

# SERVICING DIAGRAM SECTION INDEX

INDEX TITLE: PUNCH LOGICS

INDEX NUMBER — BASIC TYPE NO: 0604 | INDEX VAR. NO.: 1 | INDEX VAR. REV.: B | SHEET 2 OF 2

TYPE NO. VARIATION USAGE

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 00 | | | | | | | |
| 01 | | | | | | | |

| L/M | SHEET | DOCUMENT NUMBER | TITLE | DOCUMENT REVISION LEVEL 1 2 3 4 5 6 7 8 9 10 |
|---|---|---|---|---|
| - | - | 3842983 | Data Register Bits 4-5 | - A A A A A A A A A |
| - | - | 3842984 | Memory Address Controls | - A A A A A A A A A |
| - | - | 3842985 | Memory Address Register | - A A A A A A A B B |
| - | - | 3842986 | Memory Address Counter | - A A A A A A A B B |
| - | - | 3842987 | Memory 1 | A A A A A A A A A A |
| - | - | 3842988 | Memory 2 | A A A A A A A A A A |
| - | - | 3842989 | Clock | - - - A A B B B B B |
| - | 1 | 3842990 | Read-Punch Shift Register Col | - - - - - - - - - - |
| - | 2 | 3842990 | " " " " " | - - - - - - - - - - |
| - | 1 | 3842991 | Read-Punch Shift Register Col | - - - - - - - A A A |
| - | 2 | 3842991 | 31 to 00 | - - - - - - - A A A |
| - | 1 | 3842992 | Read-Punch Shift Register Col | - A A A A A A A A A |
| - | 2 | 3842992 | 01-30 | - A A A A A A A A A |
| - | 1 | 3842993 | Mod "V" Card Placement Chart | - A A A C D D E E E |
| - | 2 | 3842993 | " " " " " | - A A A C C C E E E |
| - | - | 3842994 | Paper Tape Punch Controls | - - - - - - - - - - |
| - | - | 3842995 | Paper Tape Punch Data | - - - - - - - - - - |
| - | - | 3842996 | Timing Chart-Shift Cycles | - - - - - - - - - - |
| - | - | 3842997 | Timing Chart-Punch Logic, 200Cpm | - - - - - - - - - - |
| - | - | 3842998 | Timing Chart-Punch Logic, 250CPM | - - - - - - - - - - |
| - | - | 3839090 | Card Edge Notch (F1174) | A A A |

APPROVALS

| FED | DATE | MFG. ENG. | DATE | DESIGN ENG. | DATE |
|---|---|---|---|---|---|
| | | | | | |

UD4 - 5086 R1

## MODULE "V" WIRING DECK

| DOCUMENT TITLE | DOCUMENT NUMBER | CURRENT REVISION |
|---|---|---|
| CHAIN LIST | P3842944-00 | Y |
| SOCKET EDIT | P3842946-00 | Y |
| CONTINUITY LIST | P3842945-00 | Y |
| SIGNAL WIRING TABLE | P3842947-00 | Y |
| CARD DECK | P3842948-00 | Y |
| PKG. COMPLEMENT | D3615639-00 | H |
| PKG. COMPLEMENT | D3615639-01 | H |

CARD DECK & RELATED HAND WIRING CHANGES

| EIR NUMBER | RELEASE INFORMATION | REVISION |
|---|---|---|
| H18603-2 | RELEASE CARD DECK | C |
| H18669-1 | HAND WIRING CHANGES | D |
| H18659-2 | HAND WIRING CHANGES | E |
| H18669-3 | HAND WIRING CHANGES | F |
| H18669-4 | FCO 9300-63 | |
| C 10100-1 | HAND WIRING CHANGES | G |
| H 19601-5 | HAND WIRING CHANGES | H |
| C 10262-1 | HAND WIRING CHANGES | J |
| C 10125-1 | HAND WIRING CHANGES | K |
| C-11222-1 | HAND WIRING CHANGES | L |
| C-11418-2 | HAND WIRING CHANGES | M |
| C-12247-1 | HAND WIRING CHANGES | N |
| C-13043-1 | HAND WIRING CHANGES | P |
| C-13449-1 | HAND WIRING CHANGES | R |
| C-14477-1 | HAND WIRING CHANGES | S |
| C-15009-1 | HAND WIRING CHANGES | T |
| C 15027-1 | HAND WIRING CHANGES | U |
| C-15886-1 | HAND WIRING CHANGES | V |
| F23470-1 | HAND WIRING CHANGES | W |
| F23977-1 | HAND WIRING CHANGES | Y |

## LOGIC INDEX

| DWG NO. | REV | TITLE | DWG NO. | REV | TITLE |
|---|---|---|---|---|---|
| D3842950-00 | - | BLOCK DIAGRAM-ROW PUNCH CONTROL UNIT | | | |
| D3842951-00 | - | TIMING CHART-READ BUFFER SEQ & SENSE | | | |
| D3842952-00 | - | TIMING CHART-LOAD BUFFER | | | |
| D3842953-00 | A | CHANNEL INTERFACE CONNECTOR-DESTINATION | | | |
| D3842954-00 | B | CHANNEL INTERFACE CONNECTOR-ORIGIN | | | |
| D3842955-00 | B | INTERFACE RECEIVERS | | | |
| D3842956-00 | D | SELECT RECEIVER & INTERFACE DRIVERS | | | |
| D3842957-00 | A | BUS IN | | | |
| D3842958-00 | - | INPUT DATA GATES BITS 0-3 | | | |
| D3842959-00 | A | INPUT DATA GATES BITS 4-7 | | | |
| D3842960-00 | - | BUS IN PARITY GENERATOR | | | |
| D3842961-00 | A | BUS OUT PARITY CHECK | | | |
| D3842962-00 | B | DEVICE ADD. COMPARITOR AND PATCH CARDS | | | |
| D3842963-00 | G | SELECT OUT, OPERATIONAL IN | | | |
| D3842964-00 | E | INITIAL SELECTION & INPUT BUS CONTROLS | | | |
| D3842965-00 | D | ADDRESS IN, STATUS IN TEST FUNCTION | | | |
| D3842966-00 | E | START RESET, INVALID FUNCTION | | | |
| D3842967-00 | A | STATUS CONTROL FF'S | | | |
| D3842968-00 | F | STATUS FLIP-FLOPS | | | |
| D3842969-00 | B | FUNCTION REGISTERS | | | |
| D3842970-00 | C | DATA CONTROLS & REQUEST IN | | | |
| D3842971-00 | B | BUFFER LOAD/UNLOAD SEQUENCE | | | |
| D3842972-00 | B | DATA REGISTER CONTROLS | | | |
| D3842973-00 | E | CLUTCH, MOTOR CONTROLS | | | |
| D3842974-00 | C | JAM DETECTION, STACKER SELECT, OFF LINE | | | |
| D3842975-00 | A | PUNCH INTERNAL CONNECTORS | | | |
| D3842976-00 | D | CYCLE COUNTER PUNCH DRIVERS READ PROBES | | | |
| D3842977-00 | B | ROW COUNTER | | | |
| D3842978-00 | C | HOLE COUNT CONTROLS | | | |
| D3842979-00 | B | HOLE COUNTERS | | | |
| D3842980-00 | C | PUNCH, R/P DATA & SHIFT CONTROLS | | | |
| D3842981-00 | A | DATA REGISTER BITS 0-1 | | | |
| D3842982-00 | A | DATA REGISTER BITS 2 & 3 | | | |
| D3842983-00 | A | DATA REGISTER BITS 4 & 5 | | | |
| D3842984-00 | A | MEMORY ADDRESS CONTROLS | | | |
| D3842985-00 | B | MEMORY ADDRESS REGISTER | | | |
| D3842986-00 | B | MEMORY ADDRESS COUNTER | | | |
| D3842987-00 | A | MEMORY 1 | | | |
| D3842988-00 | A | MEMORY 2 | | | |
| D3842989-00 | B | CLOCK | | | |
| D3842990-00 | - | READ-PUNCH SHIFT REGISTER COLUMNS 61-80 | | | |
| D3842991-00 | A | READ-PUNCH SHIFT REGISTER COLUMNS 31-60 | | | |
| D3842992-00 | A | READ-PUNCH SHIFT REGISTER COLUMNS 01-30 | | | |
| D3842993-00 | G | MOD "V" CARD PLACEMENT CHART (ROW PUNCH) | | | |
| D3842994-00 | - | PAPER TAPE PUNCH CONTROLS | | | |
| D3842995-00 | - | PAPER TAPE PUNCH DATA | | | |
| D3842996-00 | - | TIMING CHART-SHIFT CYCLES, MEM. AND MOLE COUNT | | | |
| D3842997-00 | - | TIMING CHART-PUNCH LOGIC, CARD CYCLE AND ROW TIMING-200 CPM | | | |
| D3842998-00 | - | TIMING CHART-PUNCH LOGIC, CARD CYCLE AND ROW TIMING-250 CPM | | | |
| 5030366-00 | - | COAX CONNECTORS | | | |
| D3839090-00 | - | CARD EDGE NOTCH F-1174-00 | | | |

REVISIONS

| ZONE | LTR | EIR | DESCRIPTION — FOR DETAILS SEE EIR | CHK | DATE | APPROVED |
|---|---|---|---|---|---|---|
| | - | H18603-1P | RELEASE | | 5/16/67 | |
| | A | H-18669-1 | CHG REV LEV OF LOG DWG D3842978, 987 & REV. MOD. V WIRING DECK. ADDED E.I.R. BLK. | | 6-19-67 | |
| | B | H-18817-1 | CHG REV LEV OF LOG DWG D3842956, 59, 61, 68, 69, 73, 74, 78, 79, 81-86, 92 & 93 | | 7-28-67 | |
| | C | H-18669-3 | CHG REV LEV OF LOG DWG D3842963-00, 65 & 66, 68, 73, 74 & 89, REV PUL COMP. ADD. E.I.R. | | 10-4-67 | |
| | D | C10100-1 | SEE EIR | | 1-30-68 | |
| | E | H19601-5 | SEE EIR | | 4-19-68 | |
| | F | C10262-1 | SEE EIR | | 5-24-68 | |
| | G | C10125-1 | SEE EIR | | 8/14/68 | |
| | H | C10617-1 | SEE EIR | | 12-6-68 | |
| | J | C11222-1 | SEE EIR | | 1-1-69 | |
| | K | C11283-1 | SEE EIR | | 1-10-69 | |
| | L | C11418-2 | SEE EIR | | 4-25-69 | |
| | M | C11673-1 | SEE EIR | | 7-9-69 | |
| | N | C12247-1 | SEE EIR | | 9-30-69 | |
| | P | C13043-1 | SEE EIR | | 4-13-71 | |
| | R | C13449-1 | SEE EIR | | 4-29-70 | |
| | S | C13694-1 | SEE EIR | | 6-10-70 | |
| | T | C13908-1 | SEE EIR | | 9-25-70 | |
| | U | C14477-1 | SEE EIR | | 4-1-71 | |
| | V | C15009-1 | SEE EIR | | 2-13-75 | |
| | W | C15027-1 | SEE EIR | | 7-9-71 | |
| | Y | C15027-1 | ADDED IN INVOICATION | | | |
| | Z | C15886-1 | SEE EIR | | 4-1-71 | |
| | AA | F23470-1 | CHGD REV LEVEL OF WIRING DECK. UPDATED LOGIC INDEX | | 12-27-71 | |
| | AB | F23977-1 | CHGD REV LEVEL OF WIRING DECK. UPDATED LOGIC INDEX | | 7-13-72 | |

INACTIVE FOR NEW DESIGN AFTER 5-10-72

DWG NO. 3842296

TYPE 0604

PART NO.

IDENT NO. 3842296-00

FOR MAT. REQUIREMENTS SEE L/M. L/M REV LETTER CONTROLS DOCUMENT.

COMPANY CONFIDENTIAL INFORMATION

THIS DOCUMENT CONTAINS CONFIDENTIAL INFORMATION OF THE SPERRY RAND CORPORATION IN CONSIDERATION OF THE RECEIPT OF THIS DOCUMENT, THE RECIPIENT AGREES NOT TO REPRODUCE, COPY, USE OR TRANSMIT THIS DOCUMENT AND/OR THE INFORMATION THEREIN CONTAINED, IN WHOLE OR IN PART, OR TO SUFFER SUCH ACTION BY OTHERS, FOR ANY PURPOSE EXCEPT WITH THE WRITTEN PERMISSION, FIRST OBTAINED, OF SPERRY RAND CORPORATION, AND FURTHER AGREES TO SURRENDER SAME TO SPERRY RAND CORPORATION

UNLESS OTHERWISE SPECIFIED
DIMENSIONS IN INCHES TOL. ON
2 PLACE DECIMALS ± / —
3 PLACE DECIMALS . ± / —
ANGLES ± /
HOLE DIA. TOL.
0 THRU .250 + .003 — .002
.251 THRU .500 ± .005 — .003
.501 AND LARGER ± .010 — .005
THREADS: EXT. CL 2A, INT CL 2B
COMMODITY CODE

| | | |
|---|---|---|
| LAYOUT | M.F. WEINBERG | 4-20 |
| DRAFTSMAN | M.J. Weinberg | 4-20-67 |
| CHECKED | M.J. Weinberg | 5/16/67 |
| ENGINEER | J.P. Hamm | 5/16/67 |
| APPROVAL | | |

CLASS A

UNIVAC
DIVISION OF SPERRY RAND CORPORATION

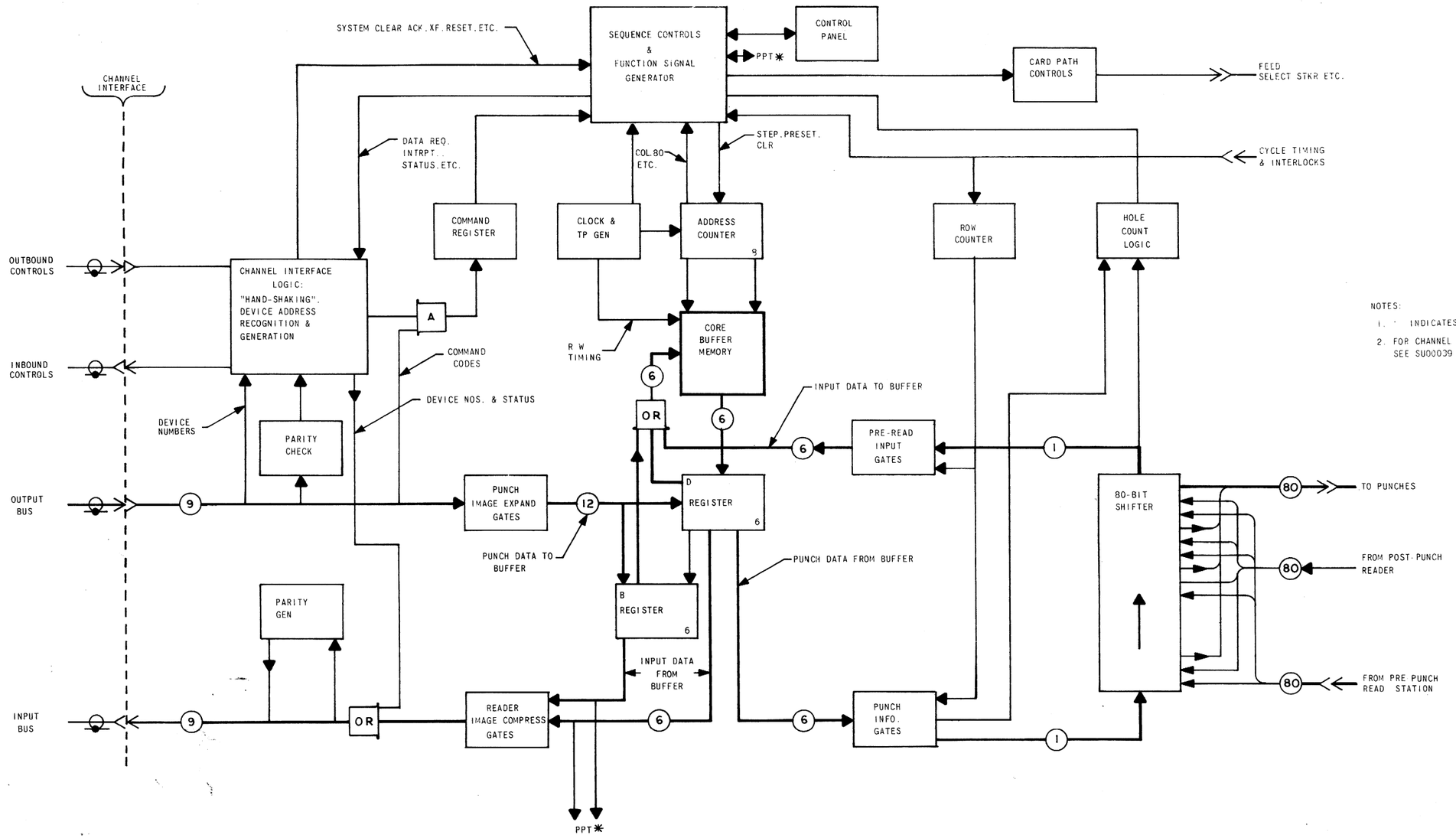
TITLE
LOGIC AND WIRING INDEX
REV LEVEL MODULE "V"

SIZE D | CODE NO. 92 | DWG NO. 3842296

SCALE

SHEET 1 OF 1

| REVISIONS | | | | | | |
|---|---|---|---|---|---|---|
| ZONE | LTR | EIR | DESCRIPTION – FOR DETAILS SEE EIR | CHK | DATE | APPROVED |
| / | – | M18603-3 | RELEASE IDENT -00 | [illegible] | 5-29-67 | W.E.S. |




NOTES:

1. * INDICATES PAPER TAPE FEATURE.
2. FOR CHANNEL INTERFACE DEFINITION SEE SU00039

DWG NO. 3842950

PART NO.
IDENT NO. 3842950 00

FOR MATL REQUIREMENTS SEE L/M, L/M REV LETTER CONTROLS DOCUMENT.


COMPANY CONFIDENTIAL INFORMATION

THIS DOCUMENT CONTAINS CONFIDENTIAL INFORMATION OF THE SPERRY RAND CORPORATION. IN CONSIDERATION OF THE RECEIPT OF THIS DOCUMENT, THE RECIPIENT AGREES NOT TO REPRODUCE, COPY, USE OR TRANSMIT THIS DOCUMENT AND/OR THE INFORMATION THEREIN CONTAINED, IN WHOLE OR IN PART, OR TO SUFFER SUCH ACTION BY OTHERS, FOR ANY PURPOSE, EXCEPT WITH THE WRITTEN PERMISSION, FIRST OBTAINED, OF SPERRY RAND CORPORATION, AND FURTHER AGREES TO SURRENDER SAME TO SPERRY RAND CORPORATION UPON DEMAND.


UNLESS OTHERWISE SPECIFIED
DIMENSIONS IN INCHES TOL ON 2 PLACE DECIMALS ± / 3 PLACE DECIMALS ± / ANGLES ±
HOLE DIA. TOL
0 THRU .250 + .003 – .002
.251 THRU .500 + .005 – .003
.501 AND LARGER + .010 – .005
THREADS: EXT. CL 2A, INT CL 2B
COMMODITY CODE

| | | |
|---|---|---|
| LAYOUT | J. Morris | 5-15-67 |
| DRAFTSMAN | G. Shaw | 5-17-67 |
| CHECKER | [illegible] | 5-23-67 |
| ENGINEER | W.E. Stahl | 6-8 67 |
| APPROVAL | W.E. Stahl | 6-8 67 |
| | J.A. Tomita A.J. Haynes | 6/12/67 |

DO NOT SCALE THIS PRINT

CLASS A

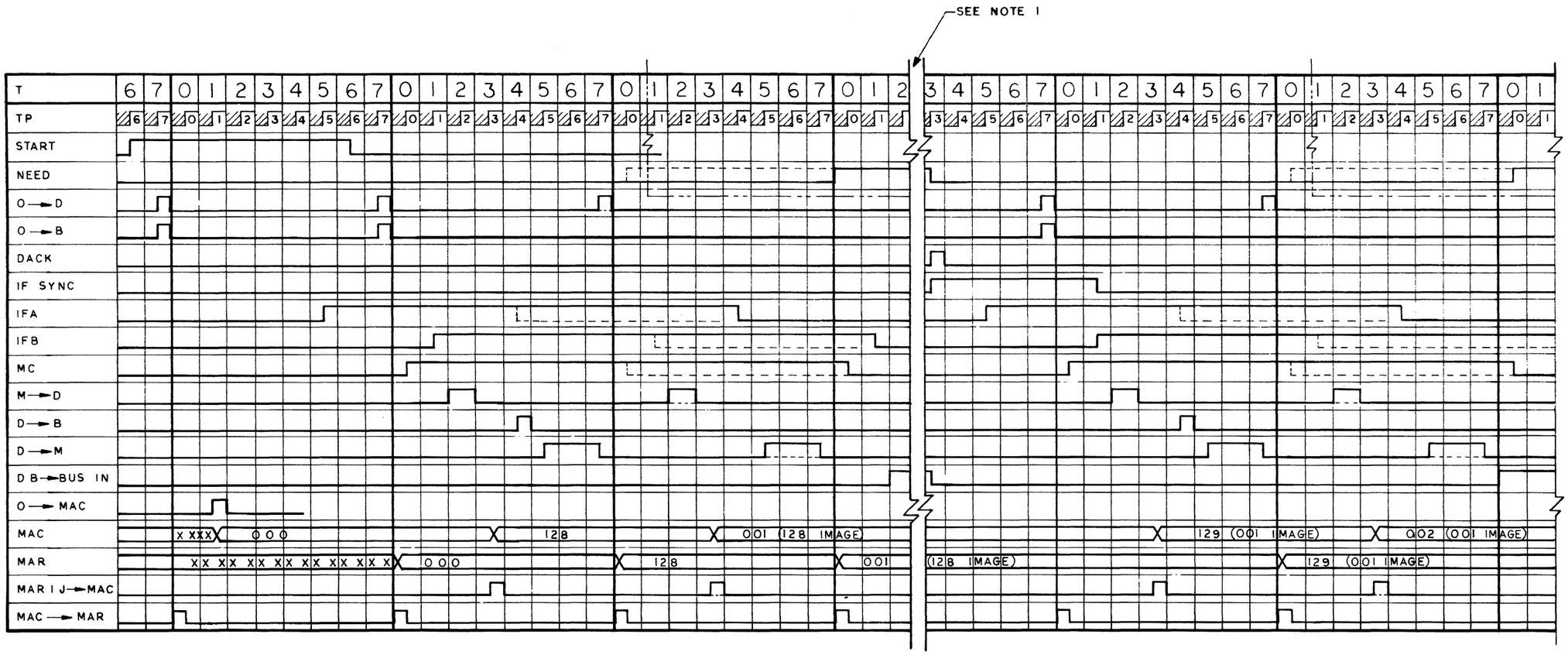
UNIVAC
DIVISION OF SPERRY RAND CORPORATION

TITLE
BLOCK DIAGRAM
ROW PUNCH CONTROL UNIT

SIZE D | CODE IDENT. NO. | DWG NO. 3842950

SCALE —— | WEIGHT | SHEET / OF /

| REVISIONS | | | | | | |
|---|---|---|---|---|---|---|
| ZONE | LTR | EIR | DESCRIPTION – FOR DETAILS SEE EIR | CHK | DATE | APPROVED |
| | – | 3118603-3 | RELEASE IDENT -00 | [illegible] | 6-7-67 | W.E.S. |




DATA PATHS & BUFFER ADDRESSING

| READ BUFFER ADDRESS | IMAGE MODE BUS IN | IMAGE MODE REGISTER | CARD ROW | | COMPRESS MODE REGISTER | COMPRESS MODE BUS IN |
|---|---|---|---|---|---|---|
| $0\text{-}79_{10}$ | 2 | D0 | 12 | | B0 | 7 |
| | 3 | D1 | 11 | | B1 | 6 |
| | 4 | D2 | 0 | UF | B2 | 5 |
| | 5 | D3 | 1 | | B3 | 2.3 |
| | 6 | D4 | 2 | | B4 | 1.3 |
| | 7 | D5 | 3 | | B5 | 3 |
| $128\text{-}207_{10}$ | 2 | D0 | 4 | | D0 | 2 |
| | 3 | D1 | 5 | | D1 | 1 |
| | 4 | D2 | 6 | LF | D2 | 1.2.3 |
| | 5 | D3 | 7 | | D3 | 1.2 |
| | 6 | D4 | 8 | | D4 | 4 |
| | 7 | D5 | 9 | | D5 | 0 |

NOTES:

1. INTERFACE SEQUENCE REFERENCE: TM 9000-2 TIMING CHARTS.
2. - - - - INDICATES IMAGE MODE ONLY.


COMPANY CONFIDENTIAL INFORMATION

THIS DOCUMENT CONTAINS CONFIDENTIAL INFORMATION OF THE SPERRY RAND CORPORATION. IN CONSIDERATION OF THE RECEIPT OF THIS DOCUMENT, THE RECIPIENT AGREES NOT TO REPRODUCE, COPY, USE OR TRANSMIT THIS DOCUMENT AND/OR THE INFORMATION THEREIN CONTAINED, IN WHOLE OR IN PART, OR TO SUFFER SUCH ACTION BY OTHERS, FOR ANY PURPOSE, EXCEPT WITH THE WRITTEN PERMISSION, FIRST OBTAINED, OF SPERRY RAND CORPORATION, AND FURTHER AGREES TO SURRENDER SAME TO SPERRY RAND CORPORATION UPON DEMAND.


~~RELEASE~~ IDENT NO. 3842951-00

FOR MATL REQUIREMENTS SEE L/M, L/M REV LETTER CONTROLS DOCUMENT.

| UNLESS OTHERWISE SPECIFIED | | | |
|---|---|---|---|
| DIMENSIONS IN INCHES TOL. ON | | | |
| 2 PLACE DECIMALS | 3 PLACE DECIMALS | ANGLES | |
| ± | ± | ± | |
| HOLE DIA. TOL. | | | |
| 0 THRU .250 + .003 – .002 | .251 THRU .500 ± .005 – .003 | .501 AND LARGER + .010 – .005 | |
| THREADS: EXT. CL 2A, INT CL 2B | | | |
| COMMODITY CODE | | | |

| | | |
|---|---|---|
| LAYOUT | J. MORRIS | DATE 5-15-67 |
| DRAFTSMAN | G. Snow | 5-18-67 |
| CHECKER | [illegible] | 6-6-67 |
| ENGINEER | W.E. Stahl | 6-8-67 |
| APPROVAL | W.E. Stahl | 6-8-67 |
| | J.A. Comito | 6/11/67 |
| | H.J. Haynes | |

DO NOT SCALE THIS PRINT

CLASS A

UNIVAC
DIVISION OF SPERRY RAND CORPORATION

TITLE: TIMING CHART– READ BUFFER, SEQUENCE & SENSE

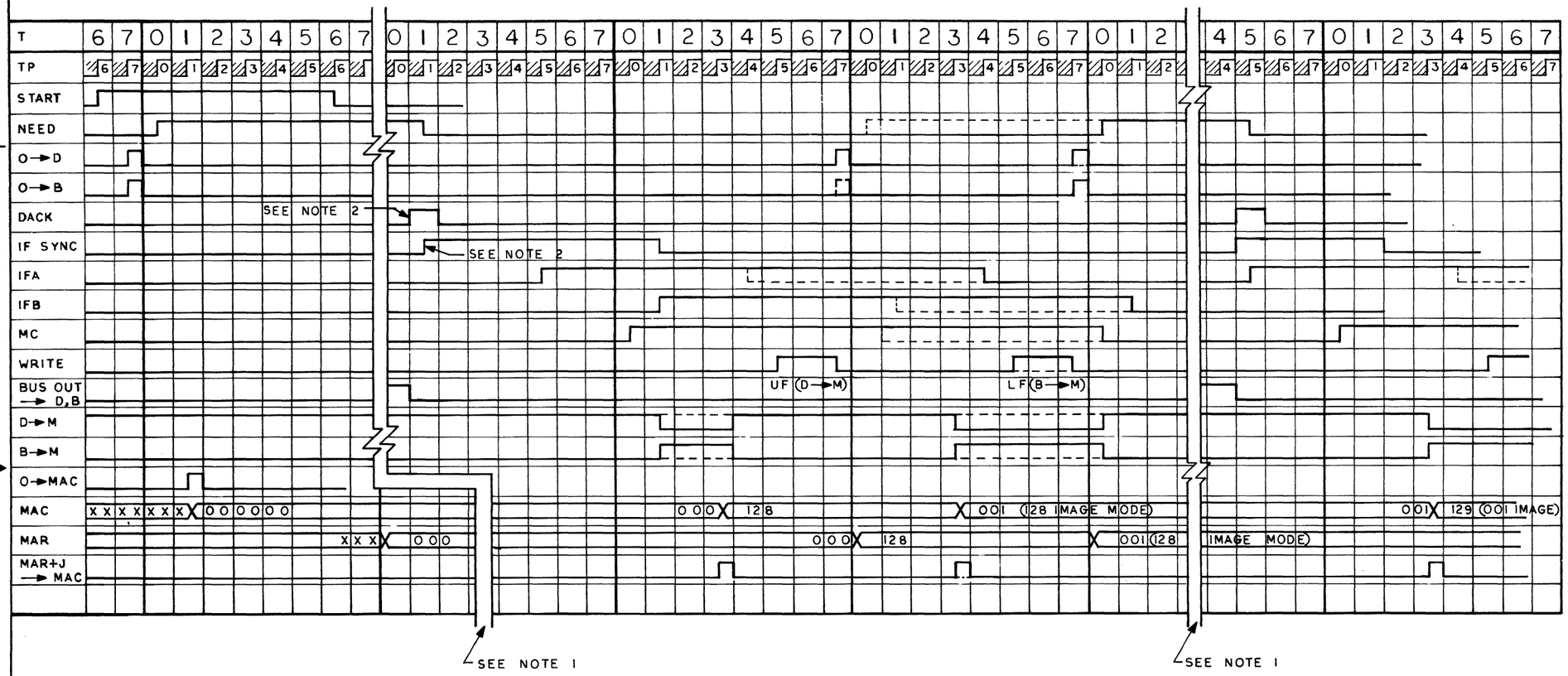
| SIZE | CODE IDENT. NO. | DWG NO. |
|---|---|---|
| D | | 3842951 |

SCALE — WEIGHT — SHEET 1 OF 1

DWG NO. 3842951

UDI-457 99/45-192-69

| REVISIONS | | | | | | |
|---|---|---|---|---|---|---|
| ZONE | LTR | EIR | DESCRIPTION – FOR DETAILS SEE EIR | CHK | DATE | APPROVED |
| | – | H18603-3 | RELEASE IDENT – 00 | | 5-23-67 | W.E.S. |




NOTES:

1. INTERFACE SEQUENCE REF: TM9000-2 TIMING CHARTS
2. ASSYNCHRONOUS - DEPENDENT ON INTERFACE SIGNALS.
3. – – – – INDICATES IMAGE MODE ONLY.

| IMAGE MODE BUS OUT | IMAGE MODE REGISTER | DATA PATHS ROW ADDRESS | EXPAND MODE REGISTER | EXPAND MODE BUS OUT |
|---|---|---|---|---|
| 2 | D0 | 12 | D0 | 7 |
| 3 | D1 | 11 | D1 | 6 |
| 4 | D2 | 0 | D2 | 5 |
| 5 | D3 | 1 | D3 | 1.2.3 |
| 6 | D4 | 2 | D4 | 1.2.3 |
| 7 | D5 | 3 | D5 | 1.2.3 |
| 2 | D0 | 4 | B0 | 1.2.3 |
| 3 | D1 | 5 | B1 | 1.2.3 |
| 4 | D2 | 6 | B2 | 1.2.3 |
| 5 | D3 | 7 | B3 | 1.2.3 |
| 6 | D4 | 8 | B4 | 4 |
| 7 | D5 | 9 | B5 | 0 |


COMPANY CONFIDENTIAL INFORMATION

THIS DOCUMENT CONTAINS CONFIDENTIAL INFORMATION OF THE SPERRY RAND CORPORATION. IN CONSIDERATION OF THE RECEIPT OF THIS DOCUMENT, THE RECIPIENT AGREES NOT TO REPRODUCE, COPY, USE OR TRANSMIT THIS DOCUMENT AND/OR THE INFORMATION THEREIN CONTAINED, IN WHOLE OR IN PART, OR TO SUFFER SUCH ACTION BY OTHERS, FOR ANY PURPOSE, EXCEPT WITH THE WRITTEN PERMISSION, FIRST OBTAINED, OF SPERRY RAND CORPORATION, AND FURTHER AGREES TO SURRENDER SAME TO SPERRY RAND CORPORATION UPON DEMAND.


UNLESS OTHERWISE SPECIFIED
DIMENSIONS IN INCHES TOL. ON 2 PLACE DECIMALS ± / 3 PLACE DECIMALS ± / ANGLES ± /
HOLE DIA. TOL. 0 THRU .250 + .003 – .002 / .251 THRU .500 + .005 – .003 / .501 AND LARGER + .010 – .005
THREADS: EXT. CL 2A, INT CL 2B
COMMODITY CODE

| | | |
|---|---|---|
| LAYOUT | J. Morris | 5-19-67 |
| DRAFTSMAN | R. Shaw | 5-16-67 |
| CHECKER | [illegible] | 5-15-67 |
| ENGINEER | W.E. Stahl | 6-8-67 |
| APPROVAL | W.E. Stahl | 6-8-67 |
| | A. Romito | 6/11/67 |
| | H.J. Haynes | |

~~PART NO.~~
IDENT NO. 3842952-00
FOR MATL REQUIREMENTS SEE L/M, L/M REV LETTER CONTROLS DOCUMENT.

CLASS A

UNIVAC
DIVISION OF SPERRY RAND CORPORATION

TITLE
TIMING CHART-LOAD BUFFER

SIZE D | CODE IDENT. NO. | DWG NO. 3842952

SCALE — | WEIGHT | SHEET 1 OF 1

DO NOT SCALE THIS PRINT

DWG NO. 3842952

UDI-457 99/45-192-69

| TT | MRCC | FUNCTION | | CABLE #3 |
|---|---|---|---|---|
| P5 | VE02 | BUS IN | 001-018 | |

| CONTACT NO. | SIGNAL TITLE INPUT | SIGNAL TITLE OUTPUT | SIGNAL DESCRIPTION | SOURCE OR OUTPUT LIST |
|---|---|---|---|---|
| 01 | VINPZ | | H BUS IN P ▲ | 957 |
| 02 | | | | |
| 03 | VINOZ | | H BUS IN O ▲ | 957 |
| 04 | | | | |
| 05 | VIN1Z | | H BUS IN 1 ▲ | 957 |
| 06 | | | | |
| 07 | VIN2Z | | H BUS IN 2 ▲ | 957 |
| 08 | | | | |
| 09 | VIN3Z | | H BUS IN 3 ▲ | 957 |
| 10 | | | | |
| 11 | VIN4Z | | H BUS IN 4 ▲ | 957 |
| 12 | | | | |
| 13 | VIN5Z | | H BUS IN 5 ▲ | 957 |
| 14 | | | | |
| 15 | VIN6Z | | H BUS IN 6 ▲ | 957 |
| 16 | | V6V1 | +6 VOLTS CHAN POWER 1 | 954 |
| 17 | VIN7Z | | H BUS IN 7 ▲ | 957 |
| 18 | | V6V2 | +6 VOLTS CHAN POWER 2 | 954,955 |

| TT | MRCC | FUNCTION | | CABLE #1 |
|---|---|---|---|---|
| P3 | VE04 | BUS OUT | 201-218 | |

| CONTACT NO. | SIGNAL TITLE INPUT | SIGNAL TITLE OUTPUT | SIGNAL DESCRIPTION | SOURCE OR OUTPUT LIST |
|---|---|---|---|---|
| 01 | | VO8PZ | H BUS OUT P 4 1 ▲ | 954,955 |
| 02 | | | | |
| 03 | | VO8OZ | H BUS OUT O ▲ | 954,955 |
| 04 | | | | |
| 05 | | VO8IZ | H BUS OUT 1 NO ▲ | 954,955 |
| 06 | | | | |
| 07 | | VO82Z | H BUS OUT 2 NO ▲ | 954,955 |
| 08 | | | | |
| 09 | | VO83Z | H BUS OUT 3 NO ▲ | 954,955 |
| 10 | | | | |
| 11 | | VO84Z | H BUS OUT 4 NO ▲ | 954,955 |
| 12 | | | | |
| 13 | | VO85Z | H BUS OUT 5 — ▲ | 954,955 |
| 14 | | | | |
| 15 | | VO86Z | H BUS OUT 6 — ▲ | 954,955 |
| 16 | | V6V5 | +6 VOLTS CHAN POWER 5 | 954 |
| 17 | | VO87Z | H BUS OUT 7 ▲ | 954,955 |
| 18 | | V6V6 | +6 VOLTS CHAN POWER 6 | 954,955 |

| REVISIONS | | | | | | |
|---|---|---|---|---|---|---|
| SYM | ZONE | EIR | DESCRIPTION | CHK | DATE | APPROVED |
| - | | H18603-1P | RELEASE | [illegible] | 5/4/67 | GJP |
| A | / | H 17601-G | SEE EIR | [illegible] | 6/1/67 | [illegible] |

| TT | MRCC | FUNCTION | | CABLE #4 |
|---|---|---|---|---|
| P4 | VE01 | INBOUND CONTROL LINES | 101-118 | |

| CONTACT NO. | SIGNAL TITLE INPUT | SIGNAL TITLE OUTPUT | SIGNAL DESCRIPTION | SOURCE OR OUTPUT LIST |
|---|---|---|---|---|
| 01 | VADINZ | | H ADRS IN ▲ | 956 |
| 02 | | | | |
| 03 | VOPINZ | | H OPL IN ▲ | 956 |
| 04 | | | | |
| 05 | VSTINZ | | H STAT IN ▲ | 956 |
| 06 | | | | |
| 07 | VSRINZ | | H SRV IN ▲ | 956 |
| 08 | | | | |
| 09 | VRQINZ | | H REQ IN ▲ | 956 |
| 10 | | | | |
| 11 | | VSP1AZ | SPARE 1A | 954 |
| 12 | | | | |
| 13 | | VSP2AZ | SPARE 2A | 954 |
| 14 | | | | |
| 15 | | VSP3AZ | SPARE 3A | 954 |
| 16 | | V6V3 | +6 VOLTS CHAN POWER 3 | 954 |
| 17 | | VSP4AZ | SPARE 4A | 954 |
| 18 | | V6V4 | +6 VOLTS CHAN POWER 4 | 954,955 |

| TT | MRCC | FUNCTION | | CABLE #2 |
|---|---|---|---|---|
| P2 | VE03 | OUTBOUND CONTROL LINES | 301-318 | |

| CONTACT NO. | SIGNAL TITLE INPUT | SIGNAL TITLE OUTPUT | SIGNAL DESCRIPTION | SOURCE OR OUTPUT LIST |
|---|---|---|---|---|
| 01 | | VADROZ | H ADRS OUT ▲ | 954,955 |
| 02 | | | | |
| 03 | | VOPOZ | H OPL OUT ▲ | 954,955 |
| 04 | | | | |
| 05 | | VCOMOZ | H COM OUT ▲ | 954,955 |
| 06 | | | | |
| 07 | | VSROZ | H SRV OUT ▲ | 954,955 |
| 08 | | | | |
| 09 | | VSUPOZ | H SUP OUT ▲ | 954,955 |
| 10 | | | | |
| 11 | | VHOLDZ | H HOLD OUT ▲ | 954,955 |
| 12 | | | | |
| 13 | | VSELOZ | H SEL OUT ENTERING FROM DEST. CONN ▲ | 962 |
| 14 | | | | |
| 15 | | VSELINZ | H SEL IN DESTINATION CONN ▲ | 962 |
| 16 | | V6V7 | +6 VOLTS CHAN POWER 7 | 954 |
| 17 | | VSP1BZ | SPARE 1B | 954 |
| 18 | | V6V8 | +6 VOLTS CHAN POWER 8 | 954,956 |

NOTE:

1. INDICATES THAT WHEN THE UNIT COMPLYS WITH THE UNREVISED I/O INTERFACE; EIGHT BIT COMPATIBLE, WHICH IS DESCRIBED IN SPECIFICATION SU00039, REV A DATED 11-14-66, THE SIGNAL TITLE INCLUDES A LINE (BAR) OVER IT AND THE SIGNAL DESCRIPTION IS PREFIXED WITH THE LETTER L INSTEAD OF THE LETTER H; FOR EXAMPLE, $\overline{\text{VINPZ}}$ L BUS IN P.

DWG NO. 3842593 B

| QTY REQD | FIND | REF DES | CODE IDENT | DWG SIZE | PART OR IDENTIFYING NO. | NOMENCLATURE OR DESCRIPTION |
|---|---|---|---|---|---|---|

LIST OF MATERIAL

~~PART NO.~~
IDENT. NO. 3842953-00

THIS DOCUMENT CONTAINS CONFIDENTIAL INFORMATION OF THE UNIVAC DIVISION OF SPERRY RAND CORPORATION AND IS FURNISHED PURSUANT TO THE FOLLOWING INSTRUMENT:

OR THE UNDERSTANDING THAT THIS DOCUMENT AND THE INFORMATION THEREON MAY NOT BE DEALT WITH IN ANY MANNER EXCEPT FOR THE PURPOSES OF THAT INSTRUMENT OR AS OTHERWISE PERMITTED IN WRITING BY THE UNIVAC DIVISION OF SPERRY RAND CORPORATION.

UNLESS OTHERWISE SPECIFIED
DIMENSIONS IN INCHES. TOLERANCE ON 2 PLACE DECIMALS ±, 3 PLACE DECIMALS ±, ANGLES ±
HOLE DIAMETER TOLERANCE: 0 THRU .250 +.003 −.002; .251 THRU .500 +.005 −.003; .501 & LARGER +.010 −.005
THREADS: EXT CL 2A, INT CL 2B
MATERIAL
FINISH
NEXT ASSY | EQUIPMENT
APPLICATION
COMMODITY CODE

| | | |
|---|---|---|
| LAYOUT | M. WEINBERG | 3-14-67 |
| DRAFTSMAN | [signature] | 3-14-67 |
| CHECKER | [signature] MJ | 5/11/67 |
| ENGINEER | [signature] | 5/4/67 |
| APPROVAL | [signature] | 5/7/67 |

CLASS A
UNIVAC DIVISION OF SPERRY RAND CORPORATION
TITLE
CHANNEL INTERFACE CONNECTOR -DESTINATION
CODE IDENT NO
SIZE D
DWG NO. 3842953
SCALE NONE
WEIGHT
SHEET 1 OF 1

DD F [redacted]

USS-1710

| TT | MRCC | FUNCTION | | CABLE #3 |
|---|---|---|---|---|
| | VD02 | BUS OUT 001-018 | | |
| CONTACT NO. | SIGNAL TITLE INPUT | OUTPUT | SIGNAL DESCRIPTION | SOURCE OR OUTPUT LIST |
| 01 | V03PZ | | H BUS OUT PAR ▲ | 953 |
| 02 | | | | |
| 03 | V030Z | | H BUS OUT 0 ▲ | 953 |
| 04 | | | | |
| 05 | V081Z | | H BUS OUT 1 ▲ | 953 |
| 06 | | | | |
| 07 | V032Z | | H BUS OUT 2 ▲ | 953 |
| 08 | | | | |
| 09 | V083Z | | H BUS OUT 3 ▲ | 953 |
| 10 | V6V1 | | +6 VOLTS CHAN POWER 1 | 953 |
| 11 | V034Z | | H BUS OUT 4 ▲ | 953 |
| 12 | | | RESERVED | |
| 13 | V035Z | | H BUS OUT 5 ▲ | 953 |
| 14 | | | | |
| 15 | V086Z | | H BUS OUT 6 ▲ | 953 |
| 16 | V6V1 | | +6 VOLTS CHAN POWER 1 | 953 |
| 17 | V087Z | | H BUS OUT 7 ▲ | 953 |
| 18 | V6V2 | | +6 VOLTS CHAN POWER 2 | 953 |

| TT | MRCC | FUNCTION | | CABLE #1 |
|---|---|---|---|---|
| | VD04 | BUS IN 201-218 | | |
| CONTACT NO. | SIGNAL TITLE INPUT | OUTPUT | SIGNAL DESCRIPTION | SOURCE OR OUTPUT LIST |
| 01 | V1NPZ | | H BUS IN P ▲ | 957 |
| 02 | | | | |
| 03 | V1NOZ | | H BUS IN 0 ▲ | 957 |
| 04 | | | | |
| 05 | V1N1Z | | H BUS IN 1 ▲ | 957 |
| 06 | | | | |
| 07 | V1N2Z | | H BUS IN 2 ▲ | 957 |
| 08 | | | | |
| 09 | V1N3Z | | H BUS IN 3 ▲ | 957 |
| 10 | V6V5 | | +6 VOLTS CHAN POWER 5 | |
| 11 | V1N4Z | | H BUS IN 4 ▲ | 957 |
| 12 | | | RESERVED | |
| 13 | V1N5Z | | H BUS IN 5 ▲ | 957 |
| 14 | | | | |
| 15 | V1N6Z | | H BUS IN 6 ▲ | 957 |
| 16 | V6V5 | | +6 VOLTS CHAN POWER 5 | 953 |
| 17 | V1N7Z | | H BUS IN 7 ▲ | 957 |
| 18 | | | +6 VOLTS CHAN POWER 6 | 953 |

| TT | MRCC | FUNCTION | | CABLE #4 |
|---|---|---|---|---|
| 11 | VD01 | OUTGOING CONTROL LINES 101-118 | | |
| CONTACT NO. | SIGNAL TITLE INPUT | OUTPUT | SIGNAL DESCRIPTION | SOURCE OR OUTPUT LIST |
| 01 | VADR0Z | | HADRS OUT ▲ | 953 |
| 02 | | | | |
| 03 | V0P0Z | | H OPL OUT ▲ | 953 |
| 04 | | | | |
| 05 | V0M0Z | | H COM OUT ▲ | 953 |
| 06 | | | | |
| 07 | VSR0Z | | H SRV OUT ▲ | 953 |
| 08 | | | | |
| 09 | VSUP0Z | | H SUP OUT ▲ | 953 |
| 10 | V6V3 | | +6 VOLTS CHAN POWER 3 | 953 |
| 11 | VHOLDZ | | H HOLD OUT ▲ | 953 |
| 12 | VSELRZ | | | 962 |
| 13 | VSELOLZ | | H SEL OUT LEAVING→ORIGI. CONN ▲ | 962 |
| 14 | | | | |
| 15 | VSELRZ | | H EL IN ENTERING FROM ORIGIN CONN ▲ | 962 |
| 16 | V6V3 | | +6 VOLTS CHAN POWER 3 | 953 |
| 17 | VSP1BZ | | SPARE 1B | 953 |
| 18 | V6V4 | | +6 VOLTS CHAN POWER 4 | 953 |

| TT | MRCC | FUNCTION | | CABLE #2 |
|---|---|---|---|---|
| | VD03 | INBOUND CONTROL LINES 301-318 | | |
| CONTACT NO. | SIGNAL TITLE INPUT | OUTPUT | SIGNAL DESCRIPTION | SOURCE OR OUTPUT LIST |
| 01 | VADINZ | | H ADRS IN ▲ | 956 |
| 02 | | | | |
| 03 | V0PINZ | | H OPL IN ▲ | 956 |
| 04 | | | | |
| 05 | VSTINZ | | H STAT IN ▲ | 956 |
| 06 | | | | |
| 07 | VSRINZ | | H SRV IN ▲ | 956 |
| 08 | | | | |
| 09 | VRQINZ | | H REQ IN ▲ | 956 |
| 10 | V6V7 | | +6 VOLTS CHAN POWER 7 | 953 |
| 11 | VSP1AZ | | SPARE 1A | 953 |
| 12 | | | RESERVED | |
| 13 | VSP2AZ | | SPARE 2A | 953 |
| 14 | | | | |
| 15 | VSP3AZ | | SPARE 3A | 953 |
| 16 | V5V7 | | +6 VOLTS CHAN POWER 7 | 953 |
| 17 | VSP4AZ | | SPARE 4A | 953 |
| 18 | V6V8 | | +6 VOLTS CHAN POWER 8 | 953 |

NOTE:

1. ▲ INDICATES THAT WHEN THE UNIT COMPLYS WITH THE UNREVISED I O INTERFACE: EIGHT BIT COMPATIBLE. WHICH IS DESCRIBED IN SPECIFICATION SP90039, REV A DATED 11-14-66. THE SIGNAL TITLE INCLUDES A LINE (BAR) OVER IT AND THE SIGNAL DESCRIPTION IS PREFIXED WITH THE LETTER L INSTEAD OF THE LETTER H: FOR EXAMPLE, $\overline{\text{VOBPZ}}$ L BUS OUT PAR.

| REVISIONS | | | | | | |
|---|---|---|---|---|---|---|
| SYMB | ZONE | EIR | DESCRIPTION | CHK | DATE | APPROVED |
| | | H18603 IP | RELEASE | AJ | 7/11/67 | [illegible] |
| A | | C10100-1 H 1960/6 | SEE EIR | [illegible] | [illegible] | [illegible] |
| B | | | SEE EIR | | | |

| QTY REQD | FIND | REF DES | CODE IDENT | DWG SIZE | PART OR IDENTIFYING NO | NOMENCLATURE OR DESCRIPTION |
|---|---|---|---|---|---|---|

LIST OF MATERIAL

~~PART NO.~~
IDENT. NO. 3842954-00

THIS DOCUMENT CONTAINS CONFIDENTIAL INFORMATION OF THE UNIVAC DIVISION OF SPERRY RAND CORPORATION AND IS FURNISHED PURSUANT TO THE FOLLOWING INSTRUMENT

ON THE UNDERSTANDING THAT THIS DOCUMENT AND THE INFORMATION THEREIN MAY NOT BE DEALT WITH IN ANY MANNER EXCEPT FOR THE PURPOSES OF THAT INSTRUMENT OR AS OTHERWISE PERMITTED IN WRITING BY THE UNIVAC DIVISION OF SPERRY RAND CORPORATION

NEXT ASSY | EQUIPMENT
APPLICATION
COMMODITY CODE

UNLESS OTHERWISE SPECIFIED
DIMENSIONS IN INCHES TOLERANCE ON 2 PLACE DECIMALS ± | 3 PLACE DECIMALS ± | ANGLES ±
HOLE DIAMETER TOLERANCE: 0 THRU 250 +.003 −.002 | 251 THRU 500 +.005 −.003 | 501 & LARGER +.010 −.005
THREADS: EXT CL 2A, INT CL 2B
MATERIAL
FINISH

| | | DATE |
|---|---|---|
| LAYOUT | M. WEINBERG | 3-14-67 |
| DRAFTSMAN | [signature] | 3-14-67 |
| CHECKER | [signature] MS | 5-11-67 |
| ENGINEER | [signature] | 5-[illegible]-67 |
| APPROVAL | [signature] | 5-[illegible]-67 |

CLASS

UNIVAC
DIVISION OF SPERRY RAND CORPORATION

TITLE
CHANNEL INTERFACE CONNECTOR-ORIGIN

CODE IDENT NO | SIZE D | DWG NO 3842954

SCALE NONE | WEIGHT | SHEET 1 OF 1

DO NOT SCALE THIS PRINT

DWG NO. 3842954 B

UP 1110

| REVISIONS | | | | | | |
|---|---|---|---|---|---|---|
| ZONE | LTR | EIR | DESCRIPTION – FOR DETAILS SEE EIR | CHK | DATE | APPROVED |
| | A | 19801-6 | REDRAWN & REVISED | | 4/19/67 | |
| | B | 11418-2 | SEE EIR | | 5/11/67 | |

L BUS OUT PAR (VOBPA) 961

L BUS OUT φ (VOBOA) 961

H BUS OUT φ (VOBO) (3839090 ●), 962

L BUS OUT φ (VOBO) (3839090 ●) 962,969,981,983

L BUS OUT 1 (VOB1A) 961

H BUS OUT 1 (VOB1) 962,981,982,983

L BUS OUT 1 (VOB1) 962,981,982,983

L BUS OUT 2 (VOB2A) 961

H BUS OUT 2 (VOB2) 962,967,981,983

L BUS OUT 2 (VOB2) 962,967,969,981,982

L BUS OUT 3 (VOB3A) 961

H BUS OUT 3 (VOB3) 962,967,981,982

L BUS OUT 3 (VOB3) 962,967,969,981,982,983

L BUS OUT 4 (VOB4A) 961

H BUS OUT 4 (VOB4) 962,965,969

L BUS OUT 4 (VOB4) 962,969,982,983

L BUS OUT 5 (VOB5A) 961

H BUS OUT 5 (VOB5) 962,965

L BUS OUT 5 (VOB5) 962,969,982

N B59 955031 VF04 — 11 — 12 13
N B59 955032 VF04 — 09 — 05 06
N B59 955033 VF04 — 10 — 14 15
N B59 955034 VF04 — 08 — 03 04
N B59 955035 VF04 — 01 — 16
N B59 955036 VF04 — 02 — 17
N B59 955037 VF08 — 11 — 12 13
N B59 955038 VF08 — 09 — 05 06
N B59 955039 VF08 — 10 — 14 15
N B59 955040 VF08 — 08 — 03 04
N B59 955041 VF08 — 01 — 16
N B59 955042 VF08 — 02 — 17

AR NLRLS2A 955002 VF03 — 18 — 01
AR LS2 955002 VF03 NLR — 18 — 01
AR NLRLS2A 955004 VF03 — 03 — 04
AR LS2 955004 VF03 NLR — 03 — 04
AR NLRLS2A 955006 VF03 — 05 — 06
AR LS2 955006 VF03 NLR — 05 — 06
AR NLRLS2A 955008 VF03 — 12 — 10
AR LS2 955008 VF03 NLR — 12 — 10
AR NLRLS2A 955010 VF03 — 17 — 16
AR LS2 955010 VF03 NLR — 17 — 16
AR NLRLS2A 955012 VF02 — 18 — 01
AR LS2 955012 VF02 NLR — 18 — 01
AR NLRLS2A 955014 VF02 — 03 — 04
AR LS2 955014 VF02 NLR — 03 — 04

SEE NOTE 1 TYP. 15 PLACES

6VR PWR 955060 VF03 — 08 09
6VR PWR 955061 VF03 — 08 09
6VR PWR 955062 VF01 — 08 09

H BUS OUT PAR (VOBP2) 953
L BUS OUT PAR (VOBP2) 953
H BUS OUT φ (VOBO2) 953
L BUS OUT φ (VOBO2) 953
H BUS OUT 1 (VOB12) 953
L BUS OUT 1 (VOB12) 953
H BUS OUT 2 (VOB22) 953
L BUS OUT 2 (VOB22) 953
H BUS OUT 3 (VOB32) 953
L BUS OUT 3 (VOB32) 953
H BUS OUT 4 (VOB42) 953
L BUS OUT 4 (VOB42) 953
H BUS OUT 5 (VOB52) 953
L BUS OUT (VOB52) 953

6 VOLTS CHAN POWER 4 (V6V4) 953
6 VOLTS CHAN POWER 2 (V6V2) 953
6 VOLTS CHAN POWER 6 (V6V6) 953

NOTES:

1. THE LOGIC COMPONENTS ENCLOSED BY DOTTED LINES ARE APPLICABLE IN PLACE OF THE COMPONENTS SHOWN IN THE NORMAL LOGIC PATH IN CONFIGURATIONS WHICH COMPLY WITH THE UNREVISED I/O INTERFACE, EIGHT BIT COMPATIBLE, WHICH IS DESCRIBED IN SPECIFICATION SU00039, REV A DATED 11-14-66.

2. ● INDICATES CARD EDGE NOTCH FEATURE F1174-00.

| SHEET INDEX | SHEET REV | 1 B | 2 A |
|---|---|---|---|

DWG NO. 3842955

COMPANY CONFIDENTIAL INFORMATION

THIS DOCUMENT CONTAINS CONFIDENTIAL INFORMATION OF THE SPERRY RAND CORPORATION. IN CONSIDERATION OF THE RECEIPT OF THIS DOCUMENT, THE RECIPIENT AGREES NOT TO REPRODUCE, COPY, USE OR TRANSMIT THIS DOCUMENT AND/OR THE INFORMATION THEREIN CONTAINED, IN WHOLE OR IN PART, OR TO SUFFER SUCH ACTION BY OTHERS, FOR ANY PURPOSE EXCEPT WITH THE WRITTEN PERMISSION, FIRST OBTAINED, OF SPERRY RAND CORPORATION, AND FURTHER AGREES TO SURRENDER SAME TO SPERRY RAND CORPORATION UPON DEMAND.

UNLESS OTHERWISE SPECIFIED
DIMENSIONS IN INCHES TOL. ON 2 PLACE DECIMALS ±, 3 PLACE DECIMALS ±, ANGLES ±
HOLE DIA. TOL. 0 THRU .250 ± .003 − .002; .251 THRU .500 ± .005 − .003; .501 AND LARGER ± .010 − .005
THREADS: EXT. CL 2A, INT CL 2B
COMMODITY CODE

| | | |
|---|---|---|
| LAYOUT | VIRGINIA TAWRESEY | 3/24/67 |
| DRAFTSMAN | VIRGINIA TAWRESEY | 3/24/67 |
| CHECKER | M.L. WEINBERG | 5/11/67 |
| ENGINEER | L.F. HARRISON | 5/11/67 |
| APPROVAL | A.J. GEHRING | 5/12/67 |

~~PART NO.~~ IDENT NO. 3842955-00

~~FOR MATL REQUIREMENTS SEE L/M, L/M REV LETTER CONTROLS DOCUMENT~~

DO NOT SCALE THIS PRINT

CLASS A

UNIVAC DIVISION OF SPERRY RAND CORPORATION

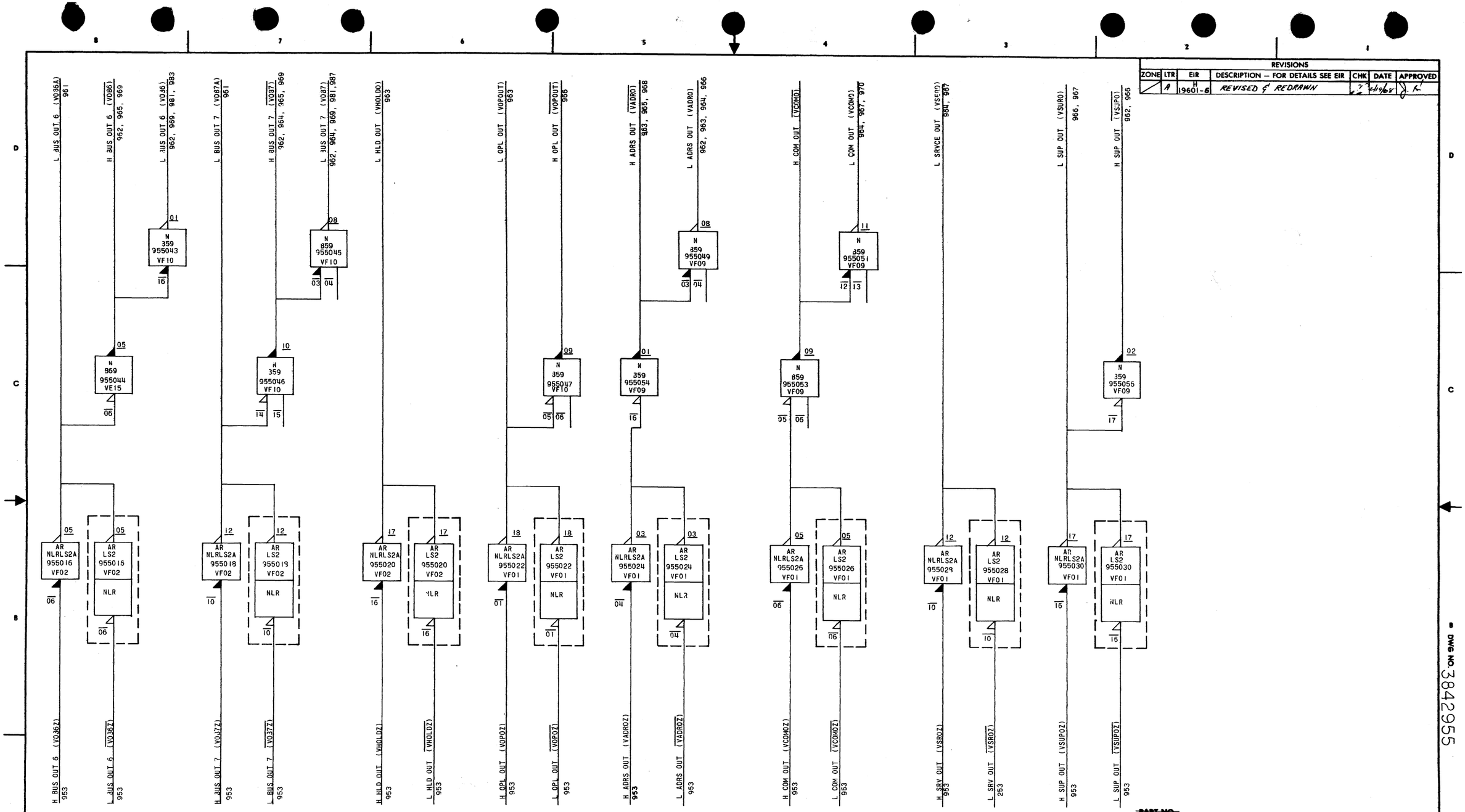
TITLE: INTERFACE RECEIVERS

SIZE D | CODE IDENT. NO. | DWG NO. 3842955

SCALE NONE | WEIGHT | SHEET 1 OF 2

A B

UDI-457 99/48-152 - 68




| REVISIONS | | | | | |
|---|---|---|---|---|---|
| ZONE | LTR | EIR | DESCRIPTION — FOR DETAILS SEE EIR | CHK | DATE | APPROVED |
| | A | H 19601-6 | REVISED & REDRAWN | | 2/14/67 | |

DWG NO. 3842955

~~PART NO.~~

IDENT NO. 3842955-00

~~FOR MATL REQUIREMENTS SEE L/M, L/M REV LETTER CONTROLS DOCUMENT~~


COMPANY CONFIDENTIAL INFORMATION

THIS DOCUMENT CONTAINS CONFIDENTIAL INFORMATION OF THE SPERRY RAND CORPORATION. IN CONSIDERATION OF THE RECEIPT OF THIS DOCUMENT, THE RECIPIENT AGREES NOT TO REPRODUCE, COPY, USE OR TRANSMIT THIS DOCUMENT AND/OR THE INFORMATION THEREIN CONTAINED, IN WHOLE OR IN PART, OR TO SUFFER SUCH ACTION BY OTHERS, FOR ANY PURPOSE, EXCEPT WITH THE WRITTEN PERMISSION, FIRST OBTAINED, OF SPERRY RAND CORPORATION, AND FURTHER AGREES TO SURRENDER SAME TO SPERRY RAND CORPORATION UPON DEMAND.


| UNLESS OTHERWISE SPECIFIED | | | | | |
|---|---|---|---|---|---|
| DIMENSIONS IN INCHES TOL. ON 2 PLACE DECIMALS + | 3 PLACE DECIMALS + | ANGLES + | | | |
| HOLE DIA. TOL. 0 THRU .250 + .003 − .002 | .251 THRU .500 + .005 − .003 | .501 AND LARGER + .010 − .005 | | | |
| THREADS: EXT. CL 2A, INT CL 2B | | | | | |
| COMMODITY CODE | | | | | |

| | | |
|---|---|---|
| LAYOUT | VIRGINIA TAWRESEY | 5/29/67 |
| DRAFTSMAN | VIRGINIA TAWRESEY | 5/29/67 |
| CHECKER | M. L. WEINBERG | 5/11/67 |
| ENGINEER | L. F. HARRISON | 5/11/67 |
| APPROVAL | A. J. GEHRING | 5/12/67 |

CLASS A

UNIVAC
DIVISION OF SPERRY RAND CORPORATION

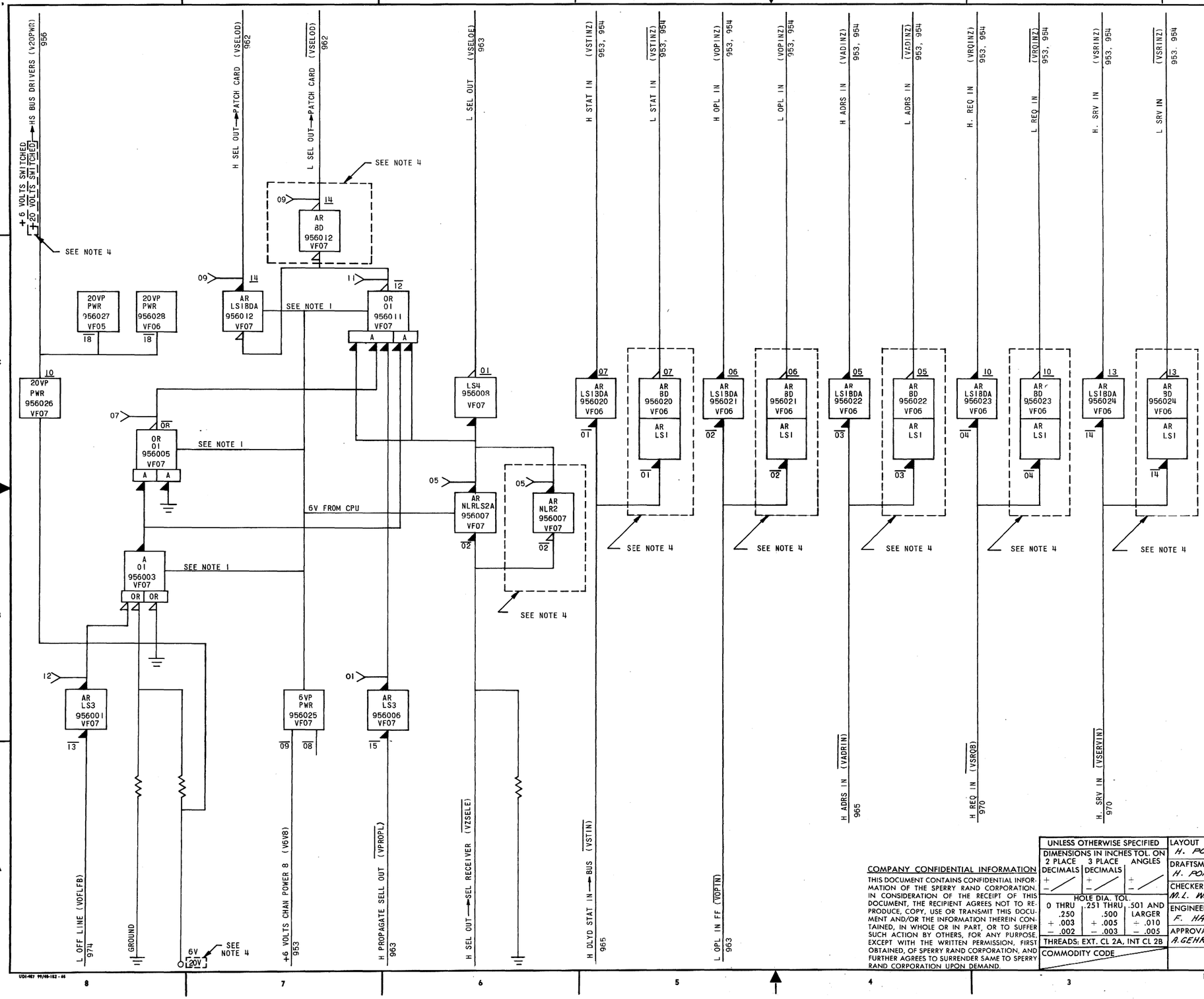
TITLE

# INTERFACE RECEIVERS

| SIZE | CODE IDENT. NO. | DWG NO. |
|---|---|---|
| D | | 3842955 |

SCALE NONE | WEIGHT | SHEET 2 OF 2

DO NOT SCALE THIS PRINT | A




| REVISIONS | | | | | | |
|---|---|---|---|---|---|---|
| ZONE | LTR | EIR | DESCRIPTION — FOR DETAILS SEE EIR | CHK | DATE | APPROVED |
| | B | H19601-6 | REVISED & REDRAWN | | 5/16/68 | |
| | C | C113222-1 | SEE EIR | | 1-1- | |
| | D | C13043-1 | SEE EIR | | 4/13/71 | |

NOTES:

1. OI CIRCUITS IN SELECT PROPAGATION LOGIC ARE INTEGRATED CIRCUITS.
2. LSIBDA (OR 3D) OUTPUTS GO TO CHANNEL VIA I/O CABLE.
3. SIGNAL LEVEL:
   INPUTS TO LSIBDA (OR LSI) AND AR LS3 (LEVEL SHIFTERS) ARE -8 TO 0V.
   INPUT TO NLR IS 0 TO +3V,
   INPUTS AND OUTPUTS OF INTEGRATED CIRCUITS ARE +6 TO 0V.
   OUTPUTS OF LSIBDA (OR 8D) ARE 0 TO +3V.
   OUTPUT OF AR-LS4 (LEVEL SHIFTER) IS -8 TO 0V.
   OUTPUT OF NLR IS +6 TO 0V.
4. THE LOGIC COMPONENTS ENCLOSED BY DOTTED LINES ARE APPLICABLE IN PLACE OF THE COMPONENTS SHOWN IN THE NORMAL LOGIC PATH IN CONFIGURATIONS WHICH COMPLY WITH THE UNREVISED I/O INTERFACE, EIGHT BIT COMPATIBLE, WHICH IS DESCRIBED IN SPECIFICATION SU00039, REV. A DATED 11-14-66.

B DWG NO. 3842956

COMPANY CONFIDENTIAL INFORMATION
THIS DOCUMENT CONTAINS CONFIDENTIAL INFORMATION OF THE SPERRY RAND CORPORATION. IN CONSIDERATION OF THE RECEIPT OF THIS DOCUMENT, THE RECIPIENT AGREES NOT TO REPRODUCE, COPY, USE OR TRANSMIT THIS DOCUMENT AND/OR THE INFORMATION THEREIN CONTAINED, IN WHOLE OR IN PART, OR TO SUFFER SUCH ACTION BY OTHERS, FOR ANY PURPOSE, EXCEPT WITH THE WRITTEN PERMISSION, FIRST OBTAINED, OF SPERRY RAND CORPORATION, AND FURTHER AGREES TO SURRENDER SAME TO SPERRY RAND CORPORATION UPON DEMAND.

PART NO.
IDENT NO. 3842956-00

FOR MATL REQUIREMENTS SEE L/M, L/M REV LETTER CONTROLS DOCUMENT.

| UNLESS OTHERWISE SPECIFIED | | | |
|---|---|---|---|
| DIMENSIONS IN INCHES TOL. ON | 2 PLACE DECIMALS | 3 PLACE DECIMALS | ANGLES |
| | ± | ± | ± |
| HOLE DIA. TOL. | 0 THRU .250 ± .003 − .002 | .251 THRU .500 ± .005 − .003 | .501 AND LARGER ± .010 − .005 |
| THREADS: EXT. CL 2A, INT CL 2B | | | |
| COMMODITY CODE | | | |

| | | |
|---|---|---|
| LAYOUT | H. PORTER | 3/4/67 |
| DRAFTSMAN | H. PORTER | 3/4/67 |
| CHECKER | M.L. WEINBERG | 3/11/67 |
| ENGINEER | F. HARRISON | 3/11/67 |
| APPROVAL | A. GEHRING | 3/11/67 |

CLASS A

UNIVAC
DIVISION OF SPERRY RAND CORPORATION

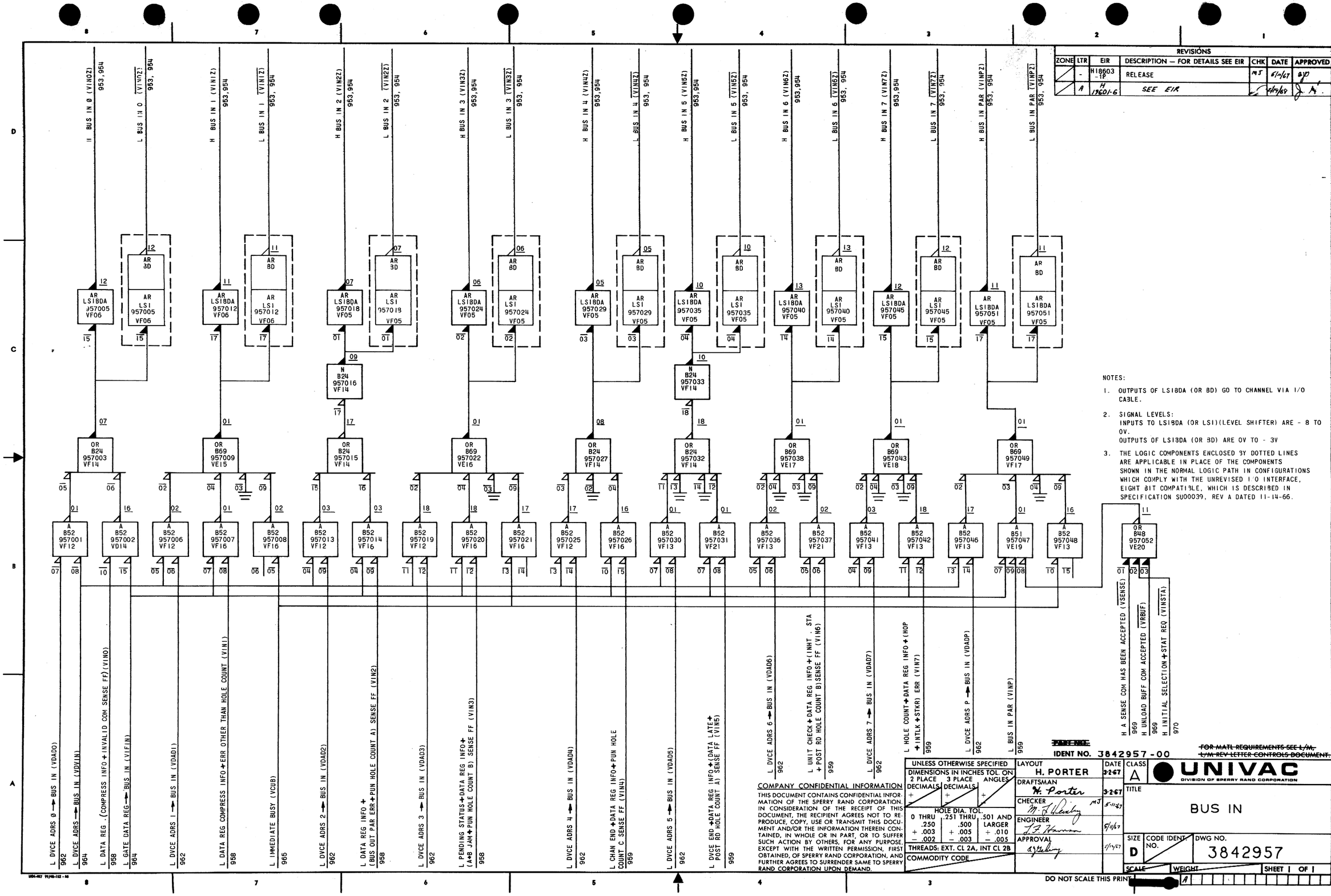
TITLE
SELECT RECEIVER AND INTERFACE DRIVERS

| SIZE | CODE IDENT. NO. | DWG NO. |
|---|---|---|
| D | | 3842956 |

SCALE — WEIGHT — SHEET 1 OF 1

DO NOT SCALE THIS PRINT

UDI-467 99/48-182-66




| ZONE | LTR | EIR | DESCRIPTION — FOR DETAILS SEE EIR | CHK | DATE | APPROVED |
|---|---|---|---|---|---|---|
| | - | H18603-1P | RELEASE | MJ | 5/1/67 | |
| | A | H 17601-6 | SEE EIR | | 6/19/68 | |

NOTES:

1. OUTPUTS OF LSIBDA (OR BD) GO TO CHANNEL VIA I/O CABLE.
2. SIGNAL LEVELS:
   INPUTS TO LSIBDA (OR LSI)(LEVEL SHIFTER) ARE - 8 TO 0V.
   OUTPUTS OF LSIBDA (OR BD) ARE 0V TO - 3V
3. THE LOGIC COMPONENTS ENCLOSED BY DOTTED LINES ARE APPLICABLE IN PLACE OF THE COMPONENTS SHOWN IN THE NORMAL LOGIC PATH IN CONFIGURATIONS WHICH COMPLY WITH THE UNREVISED I/O INTERFACE, EIGHT BIT COMPATIBLE, WHICH IS DESCRIBED IN SPECIFICATION SU00039, REV A DATED 11-14-66.

COMPANY CONFIDENTIAL INFORMATION
THIS DOCUMENT CONTAINS CONFIDENTIAL INFORMATION OF THE SPERRY RAND CORPORATION. IN CONSIDERATION OF THE RECEIPT OF THIS DOCUMENT, THE RECIPIENT AGREES NOT TO REPRODUCE, COPY, USE OR TRANSMIT THIS DOCUMENT AND/OR THE INFORMATION THEREIN CONTAINED, IN WHOLE OR IN PART, OR TO SUFFER SUCH ACTION BY OTHERS, FOR ANY PURPOSE, EXCEPT WITH THE WRITTEN PERMISSION, FIRST OBTAINED, OF SPERRY RAND CORPORATION, AND FURTHER AGREES TO SURRENDER SAME TO SPERRY RAND CORPORATION UPON DEMAND.

UNLESS OTHERWISE SPECIFIED
DIMENSIONS IN INCHES TOL. ON 2 PLACE DECIMALS +, 3 PLACE DECIMALS +, ANGLES +
HOLE DIA. TOL. 0 THRU .250 + .003 − .002; .251 THRU .500 + .005 − .003; .501 AND LARGER + .010 − .005
THREADS: EXT. CL 2A, INT CL 2B
COMMODITY CODE

| | | |
|---|---|---|
| LAYOUT | H. PORTER | 3-2-67 |
| DRAFTSMAN | H. Porter | 3-2-67 |
| CHECKER | M. J. Healey MJ | 5-11-67 |
| ENGINEER | T. J. Hannon | 5/16/67 |
| APPROVAL | J. J. Healey | 5/17/67 |

DO NOT SCALE THIS PRINT

~~PARENT~~ IDENT NO. 3842957-00

~~FOR MATL REQUIREMENTS SEE L/M, L/M REV LETTER CONTROLS DOCUMENT.~~

CLASS A

UNIVAC
DIVISION OF SPERRY RAND CORPORATION

TITLE
BUS IN

| SIZE | CODE IDENT NO. | DWG NO. |
|---|---|---|
| D | | 3842957 |

SCALE | WEIGHT | SHEET 1 OF 1

DWG NO. 3842957

| REVISIONS | | | | | | |
|---|---|---|---|---|---|---|
| ZONE | LTR | EIR | DESCRIPTION — FOR DETAILS SEE EIR | CHK | DATE | APPROVED |
| / | - | H18603 -1P | RELEASE | MS | 5-11-67 | DJ |

H DATA REG COMPRESS INFO+ INVALID COM SENSE FF (VINOT) 960
L DATA REG COMPRESS INFO+ INVALID COM SENSE FF (VINO) 957,960
H DATA REG COMPRESS INFO+ERR OTHER THAN HOLE COUNT (VIN1) 960
L DATA REG COMPRESS INFO+ERR OTHER THAN HOLE COUNT (VIN1) 957,960
H DATA REG INFO+(BUS OUT PAR ERR+PUN HOLE COUNT A) SENSE FF (VIN2) 960
L DATA REG INFO+(BUS OUT PAR ERR+PUN HOLE COUNT A) SENSE FF (VIN2) 957
L PENDING STATUS+DATA REG INFO+(A+B JAM + PUN HOLE COUNT B) SENSE FF (VIN3) 957
H PENDING STATUS+DATA REG INFO+(A+B JAM + PUN HOLE COUNT B) SENSE FF (VIN3) 960

N B69 958009 VE16 — 05 — 06
N B69 958017 VE17 — 05 — 06
N B69 958026 VE18 — 05 — 06
N B69 958037 VF17 — 05 — 06
N B24 958036 VB28 — 10 — 18
N B24 958008 VB35 — 08 — 01
N B24 958016 VC34 — 10 — 18
N B24 958024 VB35 — 10 — 18
OR B24 958006 VB35 — 01
OR B24 958015 VC34 — 18
OR B24 958025 VB35 — 18
OR B24 958034 VB28 — 18 — E 01
OR B54 958038 VB34 — 01 — E 10
OR B54 958035 VB34 — 09

A B52 958002 VB36 — 02 — 01 — 07 08
A B52 958003 VB36 — 03 — 02 — 05 06
A B52 958004 VB36 — 04 — 03 — 04 09
OR B48 958010 VD35 — 10 — 05 04 06 07
A B52 958011 VB36 — 17 — 11 — 14 13
A B52 958012 VB36 — 16 — 12 — 10 15
A B52 958013 VB33 — 01 — 13 — 07 08
OR B48 958018 VD35 — 09 — 12 13 14 15
A B52 958019 VB33 — 03 — 11 — 04 09
A B52 958020 VB33 — 18 — 12 — 12 11
A B52 958022 VB33 — 17 — 13 — 13 14
A B52 958023 VB32 — 16 — 14 — 10 15
OR B48 958033 VC32 — 10 — 04 05 06 07
A B52 958027 VB33 — 16 — 11 — 10 15
A B52 958028 VB31 — 01 — 12 — 07 08
A B52 958029 VB31 — 02 — 13 — 06 05
A B52 958030 VB36 — 18 — 14 — 11 12
A B52 958031 VB31 — 03 — 04 — 04 09
A B52 958032 VB31 — 18 — 09 — 11 12

L "D" REG 5 (VD5) 983
L COMPRESS MODE FOR UNLOAD BUFFER (VINCMP) 970
L INVALID FUNC SENSE FF (VINVF) 966
L SENSE BYTE 1 → BUS IN DATA GATES (VSENS1) 970
L SENSE BYTE 2 → BUS IN DATA GATES (VSENS2) 970
H "D" REG 1 (VD1) 981
H "D" REG 2 (VD2) 982
H "D" REG 3 (VD3) 982
H "B" DATA REG 4 (VB4) 983
L HOP EMT +STKR FULL+STKR JAM+CHIP BOX FULL (VPABN2) 974
H "D" REG 0 (VD0) 981
H "B" DATA REG 3 (VB3) 982
L DATA REG IMAGE INFO→BUS IN DATA GATES (VINIM) 970
L "D" REG 0 (VD0) 981
L BUS OUT PAR ERR (VOBPE) 961
L PUN HOLE CNTR A (VHCRPA) 979
H "B" DATA REG 5 (VB5) 983
L INITL SELECTION + STACKED STAT (VINSTA) 970
L PENDING STAT FF (VPEN) 967
L "D" REG 1 (VD1) 981
L CARD JAM AT STATION 2 PCL (VAJAM) 974
L CARD JAM AT STATION 4 PCL (VBJAM) 974
L PUN HOLE CNTRB (VHCRPB) 979

COMPANY CONFIDENTIAL INFORMATION
THIS DOCUMENT CONTAINS CONFIDENTIAL INFORMATION OF THE SPERRY RAND CORPORATION. IN CONSIDERATION OF THE RECEIPT OF THIS DOCUMENT, THE RECIPIENT AGREES NOT TO REPRODUCE, COPY, USE OR TRANSMIT THIS DOCUMENT AND/OR THE INFORMATION THEREIN CONTAINED, IN WHOLE OR IN PART, OR TO SUFFER SUCH ACTION BY OTHERS, FOR ANY PURPOSE EXCEPT WITH THE WRITTEN PERMISSION, FIRST OBTAINED, OF SPERRY RAND CORPORATION, AND FURTHER AGREES TO SURRENDER SAME TO SPERRY RAND CORPORATION UPON DEMAND.

UNLESS OTHERWISE SPECIFIED
DIMENSIONS IN INCHES TOL. ON 2 PLACE DECIMALS ± / , 3 PLACE DECIMALS ± / , ANGLES ± /
HOLE DIA. TOL. 0 THRU .250 ± .003 − .002 | .251 THRU .500 ± .005 − .003 | .501 AND LARGER ± .010 − .005
THREADS: EXT. CL 2A, INT CL 2B
COMMODITY CODE

| | | |
|---|---|---|
| LAYOUT | B. LINS | 2/28/67 |
| DRAFTSMAN | Benny Lim | 2/28/67 |
| CHECKER | M. J. Healy MS | 5/11/67 |
| ENGINEER | T. J. Harman | 5/11/67 |
| APPROVAL | | 5/11/67 |

DO NOT SCALE THIS PRINT

PART NO.
IDENT NO. 3842958-00
~~FOR MATL REQUIREMENTS SEE L/M, L/M REV LETTER CONTROLS DOCUMENT.~~

CLASS A

UNIVAC
DIVISION OF SPERRY RAND CORPORATION

TITLE
INPUT DATA GATES
BITS 0-3

SIZE D | CODE IDENT. NO. | DWG NO. 3842958
SCALE NONE | WEIGHT | SHEET 1 OF 1

DWG NO. 3842958

8 7 6 5 4 3 2 1 — A B C D

0804-457 99/66-162 - 66

| REVISIONS | | | | | | |
|---|---|---|---|---|---|---|
| ZONE | LTR | EIR | DESCRIPTION – FOR DETAILS SEE EIR | CHK | DATE | APPROVED |
| | - | H18603-1P | RELEASE | MS | 5-11-67 | GJL |
| | A | H-18817-1 | H WAS L ON INP ON COMP 010 | MS | 7-28-67 | GJL |

H CHAN END + DATA REG INFO + PUN HOLE COUNT C SENSE FF (VIN4)

L CHAN END + DATA REG INFO + PUN HOLE COUNT C SENSE FF (VIN4)

H DVCE END + DATA REG INFO + (DATA LATE + POST RD HOLE COUNT A) SENSE (VIN5)

L DVCE END + DATA REG INFO + (DATA LATE + POST RD HOLE COUNT A SENSE FF (VIN5)

H UNIT CHECK + DATA REG INFO + (INHT STAT + POST RD HOLE COUNT B) SENSE FF (VIN6)

L UNIT CHECK + DATA REG INFO + (INHT STAT + POST RD HOLE COUNT B) SENSE FF (VIN6)

H HOLE COUNT + DATA REG INFO + (HOP + INTLK + STKR) ERR (VIN7)

L HOLE COUNT + DATA REG INFO + (HOP + INTLK + STKR) ERR (VIN7)

L CHAN END (VCHEND)

L INITL SELECTION + STACKED STAT (VINSTA)

L "D" REG 2 (VD2)

L DATA REG IMAGE INFO → BUS IN DATA GATES (VINIM)

L COMPRESS MODE FOR UNLOAD BUFFER (VINCMP)

L PUN HOLE CNTR C (VHCRPC)

L SENSE BYTE 2 → BUS IN DATA GATES (VSENS2)

L INST COMPLETED (VDVEND)

H INST IS BEING EXECUTED (VACTIVE)

L "D" REG 3 (VD3)

L "B" DATA REG 2 (VB2)

L SENSE BYTE 1 → BUS IN DATA GATES (VSENS1)

L DATA TRANS NOT COMPLETED BEFORE CYCLE START (VDLATE)

L POST READ HOLE CNTR A (VHCR2A)

L A SENSE FF IS SET (VUNCK)

L "D" REG 4 (VD4)

L "B" DATA REG 1 (VB1)

L INHT STAT IN FF (VINHST)

L POST READ CNTR B (VHCR2B)

L HOLE COUNT ERR (VUNEX)

L "D" REG 5 (VD5)

L "B" DATA REG 0 (VB0)

L INTLK SENSE FF (VINTF)

L POST RD HOLE CNTR C (VHCR2C)

L HOP ENT + STKR FULL + STKR JAM + CHIP BOX FULL (VHESF)


COMPANY CONFIDENTIAL INFORMATION

THIS DOCUMENT CONTAINS CONFIDENTIAL INFORMATION OF THE SPERRY RAND CORPORATION. IN CONSIDERATION OF THE RECEIPT OF THIS DOCUMENT, THE RECIPIENT AGREES NOT TO REPRODUCE, COPY, USE OR TRANSMIT THIS DOCUMENT AND/OR THE INFORMATION THEREIN CONTAINED, IN WHOLE OR IN PART, OR TO SUFFER SUCH ACTION BY OTHERS, FOR ANY PURPOSE, EXCEPT WITH THE WRITTEN PERMISSION, FIRST OBTAINED, OF SPERRY RAND CORPORATION, AND FURTHER AGREES TO SURRENDER SAME TO SPERRY RAND CORPORATION UPON DEMAND.


UNLESS OTHERWISE SPECIFIED

DIMENSIONS IN INCHES TOL. ON 2 PLACE DECIMALS ± /, 3 PLACE DECIMALS ± /, ANGLES ± /

HOLE DIA. TOL.: 0 THRU .250 + .003 − .002; .251 THRU .500 + .005 − .003; .501 AND LARGER + .010 − .005

THREADS: EXT. CL 2A, INT CL 2B

COMMODITY CODE

| | | |
|---|---|---|
| LAYOUT | B. LINS | 3/1/67 |
| DRAFTSMAN | | 3/1/67 |
| CHECKER | | 5-11-67 |
| ENGINEER | | 5/11/67 |
| APPROVAL | | 5/12/67 |

~~PART NO.~~

IDENT NO. 3842959-00

~~FOR MATL REQUIREMENTS SEE L/M. L/M REV LETTER CONTROLS DOCUMENT.~~

CLASS A

UNIVAC

DIVISION OF SPERRY RAND CORPORATION

TITLE: INPUT DATA GATES BITS 4-7

SIZE D | CODE IDENT. NO. | DWG NO. 3842959

SCALE NONE | WEIGHT | SHEET 1 OF 1

DO NOT SCALE THIS PRINT

DWG NO. 3842959

| REVISIONS | | | | | | |
|---|---|---|---|---|---|---|
| ZONE | LTR | EIR | DESCRIPTION — FOR DETAILS SEE EIR | CHK | DATE | APPROVED |
| | - | H18603-1P | RELEASE | MJ | 5-11-67 | ph |

957

L BUS IN PAR (VINP)

OR B69 960026 VE15 — 14

OR B69 960030 VE15 — 18

A B69 960022 VE15 — 15 16 17

A B69 960023 VE15 — 15 18

A B69 960024 VE15 — 16 18

A B69 960025 VE15 — 17 18

A B69 960027 VE15 — 15 16

A B69 960028 VE15 — 16 17

A B69 960029 VE15 — 15 17

OR B69 960005 VF18 — 14

OR B69 960009 VF18 — 18

OR B69 960014 VF17 — 14

OR B69 960018 VF17 — 18

OR B69 960021 VF18 — 01

A B69 960001 VF18 — 15 17 16

A B69 960002 VF18 — 15 18

A B69 960003 VF18 — 16 18

A B69 960004 VF18 — 17 18

A B69 960006 VF18 — 15 16

A B69 960007 VF18 — 16 17

A B69 960008 VF18 — 15 17

A B69 960010 VF17 — 15 17 16

A B69 960011 VF17 — 15 18

A B69 960012 VF17 — 16 18

A B69 960013 VF17 — 17 18

A B69 960015 VF17 — 15 16

A B69 960016 VF17 — 16 17

A B69 960017 VF17 — 15 17

A B52 960019 VF21 — 03 04 09

A B52 960020 VF21 — 03 18 11 12

03 02 04 09

H HOLE COUNT + DATA REG INFO + (HOP + INTLK + STKR) ERR (VIN7) — 959

M UNIT CHECK + DATA REG INFO + (UNIT STAT + POST RD HOLE COUNT B) SENSE FF (VIN6) — 959

H DVCE END + DATA REG INFO + (DATA LATE + POST RD HOLE COUNT A) SENSE FF (VIN5) — 959

H CHAN END + DATA REG INFO + PUN HOLE COUNT C) SENSE FF (VIN4) — 959

H PENDING STATUS + DATA REG INFO + (A-B JAM PUN HOLE COUNT B) SENSE FF (VIN3) — 958

H DATA REG INFO + (BUS OUT PAR ERR) + PUN HOLE COUNT A) SENSE FF (VIN2) — 958

H D ATA REG COMPRESS INFO + INVALID COM SENSE FF (VINO) — 958

H DATA REG COMPRESS INFO + ERR OTHER THAN HOLE COUNT (VIN1) — 958

L DATA REG COMPRESS INFO + INVALID COM SENSE FF (VINO) — 958

L DATA REG COMPRESS INFO + ERR OTHER THAN HOLE COUNT (VIN1) — 958


COMPANY CONFIDENTIAL INFORMATION

THIS DOCUMENT CONTAINS CONFIDENTIAL INFORMATION OF THE SPERRY RAND CORPORATION. IN CONSIDERATION OF THE RECEIPT OF THIS DOCUMENT, THE RECIPIENT AGREES NOT TO REPRODUCE, COPY, USE OR TRANSMIT THIS DOCUMENT AND/OR THE INFORMATION THEREIN CONTAINED, IN WHOLE OR IN PART, OR TO SUFFER SUCH ACTION BY OTHERS, FOR ANY PURPOSE, EXCEPT WITH THE WRITTEN PERMISSION, FIRST OBTAINED, OF SPERRY RAND CORPORATION, AND FURTHER AGREES TO SURRENDER SAME TO SPERRY RAND CORPORATION UPON DEMAND.


IDENT NO. 3842960-00

~~FOR MATL REQUIREMENTS SEE L/M, L/M REV LETTER CONTROLS DOCUMENT.~~

| UNLESS OTHERWISE SPECIFIED | | | LAYOUT | DATE |
|---|---|---|---|---|
| DIMENSIONS IN INCHES TOL. ON | | | H. PORTER | 3-67 |
| 2 PLACE DECIMALS | 3 PLACE DECIMALS | ANGLES | DRAFTSMAN H. Porter | 3-67 |
| + | + | + | CHECKER M L Healy | 5-11-67 |
| HOLE DIA. TOL. | | | ENGINEER L J Hanson | 5/11/67 |
| 0 THRU .250 + .003 − .002 | .251 THRU .500 + .005 − .003 | .501 AND LARGER + .010 − .005 | APPROVAL | 5/9/67 |
| THREADS: EXT. CL 2A, INT CL 2B | | | | |
| COMMODITY CODE | | | | |

DO NOT SCALE THIS PRINT

CLASS A

UNIVAC
DIVISION OF SPERRY RAND CORPORATION

TITLE: BUS IN PARITY GENERATOR

| SIZE | CODE IDENT. NO. | DWG NO. |
|---|---|---|
| D | | 3842960 |

SCALE — WEIGHT — SHEET 1 OF 1

DWG NO. 3842960

| REVISIONS | | | | | | |
|---|---|---|---|---|---|---|
| ZONE | LTR | EIR | DESCRIPTION — FOR DETAILS SEE EIR | CHK | DATE | APPROVED |
| | - | H18603-1P | RELEASE | MJ | 5-11-67 | |
| | A | H-18817-1 | REVISED INPUT ON COMP 041 | MJ | 7-28-67 | |

L ODD PAR BUS OUT (VO80DD) 962, 965

H ODD PAR BUS OUT (VO80DD) 965

N B59 961037 VE21

OR B69 961032 VF19

OR B69 961036 VF19

A B69 961028 VF19 · A B69 961029 VF19 · A B69 961030 VF19 · A B69 961031 VF19 · A B69 961033 VF19 · A B69 961034 VF19 · A B69 961035 VF19

OR B69 961008 VE16 · OR B69 961009 VE16 · OR B69 961014 VE17 · OR B69 961018 VE17 · OR B69 961023 VE18 · OR B69 961027 VE18

A B69 961001 VE16 · A B69 961002 VE16 · A B69 961003 VE16 · A B69 961004 VE16 · A B69 961005 VE16 · A B69 961006 VE16 · A B69 961007 VE16

A B69 961010 VE17 · A B69 961011 VE17 · A B69 961012 VE17 · A B69 961013 VE17 · A B69 961015 VE17 · A B69 961016 VE17 · A B69 961017 VE17

A B69 961019 VE18 · A B69 961020 VE18 · A B69 961021 VE18 · A B69 961022 VE18 · A B69 961024 VE18 · A B69 961025 VE18 · A B69 961026 VE18

L BUS OUT 0 (VO80A) 955 · L BUS OUT 1 (VO81A) 955 · L BUS OUT 2 (VO82A) 955 · L BUS OUT 3 (VO83A) 955 · L BUS OUT 4 (VO84A) 955 · L BUS OUT 5 (VO85A) 955 · L BUS OUT 6 (VO86A) 955 · L BUS OUT 7 (VO87A) 955 · L BUS OUT PAR (VO8PA) 955

L PAR ERR DATA TRANS CHAN → SUBSYSTEM (VPARE) 970

H BUS OUT PAR ERR (VO8PE)

L BUS OUT PAR ERR (VO8PE) 958

H BUS OUT PAR ERR (DATA) (VO8EP) 968

FF B59/B24 961045 VE21 · 961044 VD17

FF B48/B48 961041 VE20 · 961040 VE20

OR · OR

OR B52 961043 VD18

A B51 961042 VE19

A B48 961039 VE20

H DATA REQ (VDRQ) 970

L DATA REQ (VDRQ) 970

L CONNECTED FF (VS3) 964

H CHAN END (VCHEND) 968

H CLR (GENERATED MANUALLY + SELECTIVE RESET CHAN CLR (VCLRA) 966

H CLR SENSE FF'S (VCLSENS) 966

H FUNC PAR ERR (VFPEP) 965

L DATA ACK (VDACK) 970

L LOAD BUFF COM HAS BEEN ACCEPTED (VLBUF) 969

DWG NO. 3842961

COMPANY CONFIDENTIAL INFORMATION

THIS DOCUMENT CONTAINS CONFIDENTIAL INFORMATION OF THE SPERRY RAND CORPORATION. IN CONSIDERATION OF THE RECEIPT OF THIS DOCUMENT, THE RECIPIENT AGREES NOT TO REPRODUCE, COPY, USE OR TRANSMIT THIS DOCUMENT AND/OR THE INFORMATION THEREIN CONTAINED, IN WHOLE OR IN PART, OR TO SUFFER SUCH ACTION BY OTHERS, FOR ANY PURPOSE, EXCEPT WITH THE WRITTEN PERMISSION, FIRST OBTAINED, OF SPERRY RAND CORPORATION, AND FURTHER AGREES TO SURRENDER SAME TO SPERRY RAND CORPORATION UPON DEMAND.

~~PART NO.~~

IDENT NO. 3842961-00

~~FOR MATL REQUIREMENTS SEE L/M. L/M REV LETTER CONTROLS DOCUMENT.~~

| UNLESS OTHERWISE SPECIFIED | |
|---|---|
| DIMENSIONS IN INCHES TOL. ON 2 PLACE DECIMALS ± | 3 PLACE DECIMALS ± |
| ANGLES ± | |
| HOLE DIA. TOL. 0 THRU .250 + .003 − .002 | .251 THRU .500 + .005 − .003 |
| .501 AND LARGER + .010 − .005 | |
| THREADS: EXT. CL 2A, INT CL 2B | |
| COMMODITY CODE | |

| | | |
|---|---|---|
| LAYOUT | H. PORTER | 3-6-67 |
| DRAFTSMAN | H. Porter | 3-6-67 |
| CHECKER | M. S. Hanley | MJ 5-11-67 |
| ENGINEER | E. E. Hammin | 5/1/67 |
| APPROVAL | [illegible] | 5/24/67 |

CLASS A

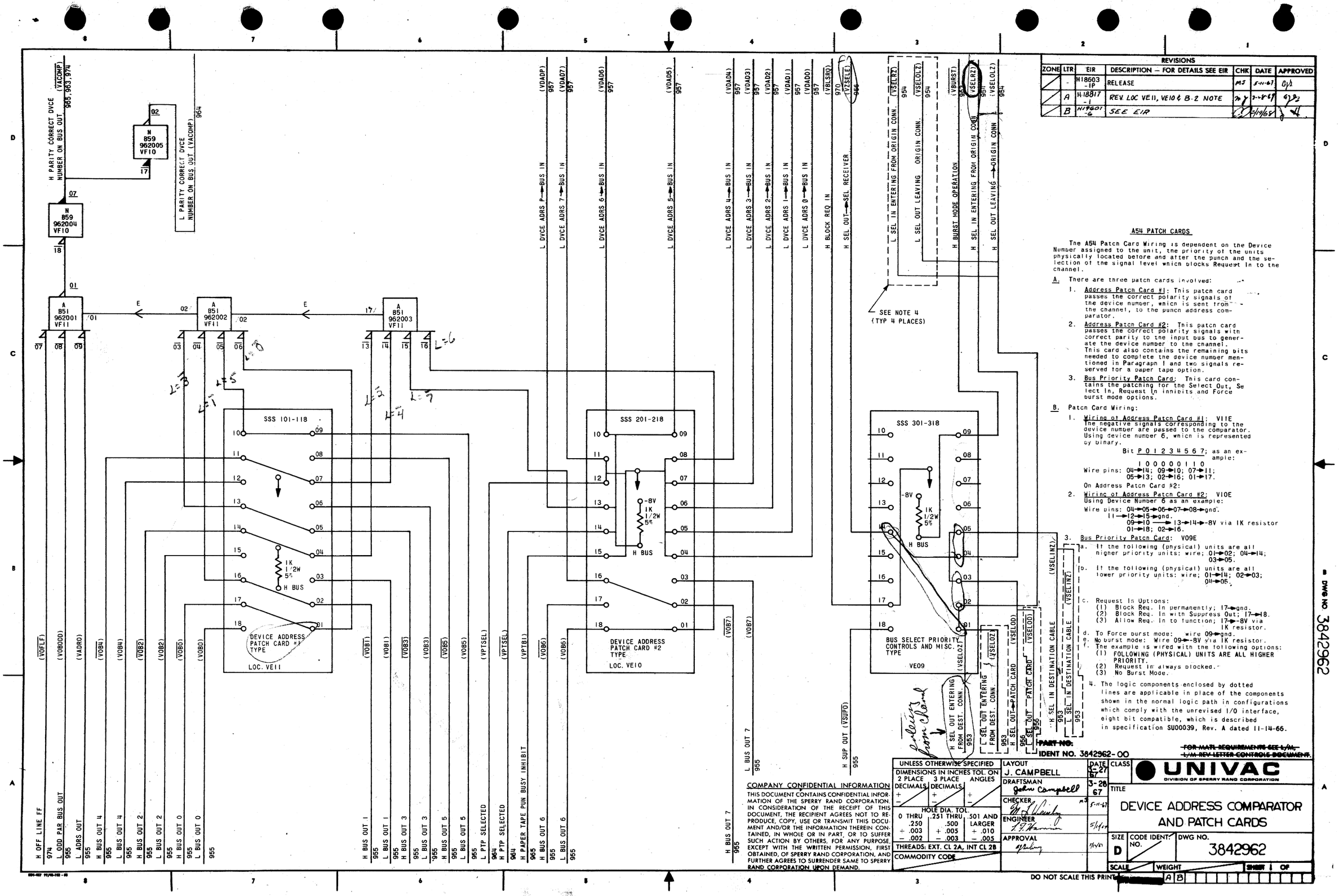
UNIVAC
DIVISION OF SPERRY RAND CORPORATION

TITLE: BUS OUT PARITY CHECK

SIZE D · CODE IDENT NO. · DWG NO. 3842961

SCALE · WEIGHT · SHEET 1 OF 1

DO NOT SCALE THIS PRINT




| REVISIONS | | | | | | |
|---|---|---|---|---|---|---|
| ZONE | LTR | EIR | DESCRIPTION — FOR DETAILS SEE EIR | CHK | DATE | APPROVED |
| | - | H18603 -1P | RELEASE | MJ | 5-11-67 | |
| | A | H-18817 -1 | REV LOC VE11, VE10 & B-2 NOTE | MJ | 7-26-67 | |
| | B | H-19601 -6 | SEE EIR | | 3/19/68 | |

## A54 PATCH CARDS

The A54 Patch Card Wiring is dependent on the Device Number assigned to the unit, the priority of the units physically located before and after the punch and the selection of the signal level which blocks Request In to the channel.

A. There are three patch cards involved:

1. Address Patch Card #1: This patch card passes the correct polarity signals of the device number, which is sent from the channel, to the punch address comparator.
2. Address Patch Card #2: This patch card passes the correct polarity signals with correct parity to the input bus to generate the device number to the channel. This card also contains the remaining bits needed to complete the device number mentioned in Paragraph 1 and two signals reserved for a paper tape option.
3. Bus Priority Patch Card: This card contains the patching for the Select Out, Select In, Request In inhibits and Force burst mode options.

B. Patch Card Wiring:

1. Wiring of Address Patch Card #1: V11E
The negative signals corresponding to the device number are passed to the comparator. Using device number 6, which is represented by binary.

Bit P 0 1 2 3 4 5 6 7; as an example:

1 0 0 0 0 0 1 1 0

Wire pins: 04→14; 09→10; 07→11; 05→13; 02→16; 01→17.

On Address Patch Card #2:

2. Wiring of Address Patch Card #2: V10E
Using Device Number 6 as an example:

Wire pins: 04→05→06→07→08→gnd.
11→12→15→gnd.
09→10 → 13→14→-8V via 1K resistor
01→18; 02→16.

3. Bus Priority Patch Card: V09E

a. If the following (physical) units are all higher priority units: wire; 01→02; 04→14; 03→05.

b. If the following (physical) units are all lower priority units: wire; 01→14; 02→03; 04→05.

c. Request In Options:
(1) Block Req. In permanently; 17→gnd.
(2) Block Req. In with Suppress Out; 17→18.
(3) Allow Req. In to function; 17→-8V via 1K resistor.

d. To Force burst mode: wire 09→gnd.
e. No burst mode: Wire 09→-8V via 1K resistor.
f. The example is wired with the following options:
(1) FOLLOWING (PHYSICAL) UNITS ARE ALL HIGHER PRIORITY.
(2) Request In always blocked.
(3) No Burst Mode.

4. The logic components enclosed by dotted lines are applicable in place of the components shown in the normal logic path in configurations which comply with the unrevised I/O interface, eight bit compatible, which is described in specification SU00039, Rev. A dated 11-14-66.

PART NO.
IDENT NO. 3842962-00

~~FOR MATL REQUIREMENTS SEE L/M, L/M REV LETTER CONTROLS DOCUMENT.~~

COMPANY CONFIDENTIAL INFORMATION
THIS DOCUMENT CONTAINS CONFIDENTIAL INFORMATION OF THE SPERRY RAND CORPORATION. IN CONSIDERATION OF THE RECEIPT OF THIS DOCUMENT, THE RECIPIENT AGREES NOT TO REPRODUCE, COPY, USE OR TRANSMIT THIS DOCUMENT AND/OR THE INFORMATION THEREIN CONTAINED, IN WHOLE OR IN PART, OR TO SUFFER SUCH ACTION BY OTHERS, FOR ANY PURPOSE, EXCEPT WITH THE WRITTEN PERMISSION, FIRST OBTAINED, OF SPERRY RAND CORPORATION, AND FURTHER AGREES TO SURRENDER SAME TO SPERRY RAND CORPORATION UPON DEMAND.

UNLESS OTHERWISE SPECIFIED
DIMENSIONS IN INCHES TOL. ON 2 PLACE DECIMALS ± ; 3 PLACE DECIMALS ± ; ANGLES ±
HOLE DIA. TOL. 0 THRU .250 + .003 − .002; .251 THRU .500 + .005 − .003; .501 AND LARGER + .010 − .005
THREADS: EXT. CL 2A, INT CL 2B
COMMODITY CODE

| | | |
|---|---|---|
| LAYOUT | J. CAMPBELL | DATE 2-27-67 |
| DRAFTSMAN | John Campbell | 3-28-67 |
| CHECKER | MJ 5-11-67 | |
| ENGINEER | 5/14/67 | |
| APPROVAL | 11-4-67 | |

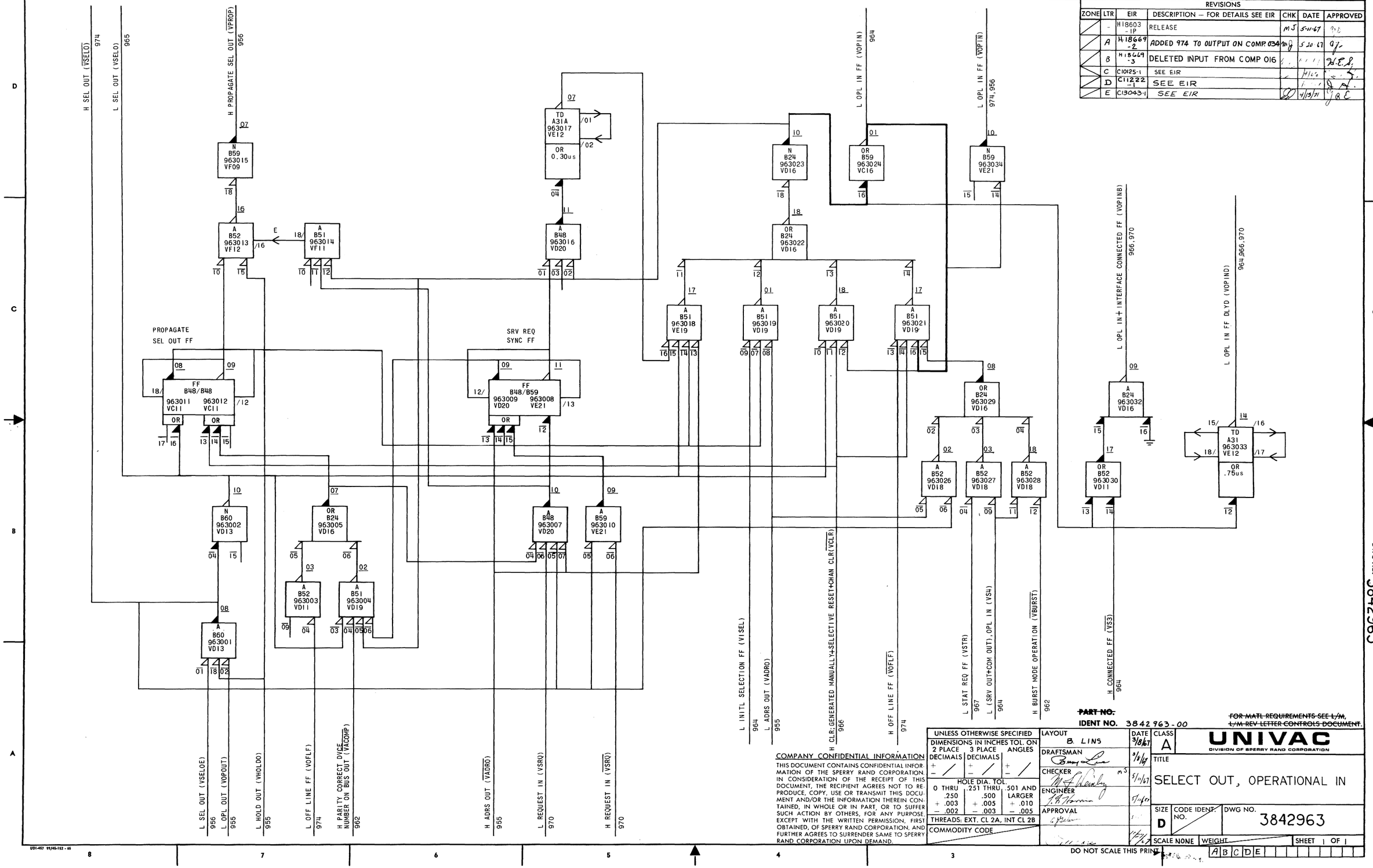
CLASS
UNIVAC DIVISION OF SPERRY RAND CORPORATION

TITLE
DEVICE ADDRESS COMPARATOR AND PATCH CARDS

SIZE D | CODE IDENT. NO. | DWG NO. 3842962
SCALE | WEIGHT | SHEET 1 OF

DO NOT SCALE THIS PRINT

DWG NO. 3842962




| REVISIONS | | | | | | |
|---|---|---|---|---|---|---|
| ZONE | LTR | EIR | DESCRIPTION — FOR DETAILS SEE EIR | CHK | DATE | APPROVED |
| | - | H18603-1P | RELEASE | MJS | 5-11-67 | |
| | A | H18669-2 | ADDED 974 TO OUTPUT ON COMP 034 | | 5-30-67 | |
| | B | H18669-3 | DELETED INPUT FROM COMP 016 | | " " " | |
| | C | C10125-1 | SEE EIR | | 9/6/68 | |
| | D | C11222-1 | SEE EIR | | " " " | |
| | E | C13043-1 | SEE EIR | | 9/13/71 | |

DWG NO. 3842963

COMPANY CONFIDENTIAL INFORMATION
THIS DOCUMENT CONTAINS CONFIDENTIAL INFORMATION OF THE SPERRY RAND CORPORATION. IN CONSIDERATION OF THE RECEIPT OF THIS DOCUMENT, THE RECIPIENT AGREES NOT TO REPRODUCE, COPY, USE OR TRANSMIT THIS DOCUMENT AND/OR THE INFORMATION THEREIN CONTAINED, IN WHOLE OR IN PART, OR TO SUFFER SUCH ACTION BY OTHERS, FOR ANY PURPOSE, EXCEPT WITH THE WRITTEN PERMISSION, FIRST OBTAINED, OF SPERRY RAND CORPORATION, AND FURTHER AGREES TO SURRENDER SAME TO SPERRY RAND CORPORATION UPON DEMAND.

UNLESS OTHERWISE SPECIFIED
DIMENSIONS IN INCHES TOL. ON 2 PLACE DECIMALS ± / 3 PLACE DECIMALS ± / ANGLES ± /
HOLE DIA. TOL. 0 THRU .250 ± .003 − .002; .251 THRU .500 ± .005 − .003; .501 AND LARGER ± .010 − .005
THREADS: EXT. CL 2A, INT CL 2B
COMMODITY CODE

| | | |
|---|---|---|
| LAYOUT | B. LINS | 3/8/67 |
| DRAFTSMAN | Barry Lins | 3/6/67 |
| CHECKER | M. A. Weinberg MS | 5/11/67 |
| ENGINEER | T. R. Harmon | 5/16/67 |
| APPROVAL | G. Peirce | 5/ /67 |
| | | 11/27/67 |

PART NO.
IDENT NO. 3842963-00
~~FOR MATL REQUIREMENTS SEE L/M, L/M REV LETTER CONTROLS DOCUMENT.~~

CLASS A
UNIVAC
DIVISION OF SPERRY RAND CORPORATION

TITLE
SELECT OUT, OPERATIONAL IN

SIZE D | CODE IDENT. NO. | DWG NO. 3842963
SCALE NONE | WEIGHT | SHEET 1 OF 1

DO NOT SCALE THIS PRINT

UDI-467 99/45-152 - 65

| REVISIONS | | | | | | |
|---|---|---|---|---|---|---|
| ZONE | LTR | EIR | DESCRIPTION – FOR DETAILS SEE EIR | CHK | DATE | APPROVED |
| | - | H18603-1P | RELEASE | MJ | 5-11-67 | [illegible] |
| | A | H-18817-1 | REVISED INP ON COMP 005 | [illegible] | 7-25-67 | [illegible] |
| | B | C10025-1 | SEE EIR | [illegible] | 11-1-67 | [illegible] |
| | C | 13649-1 | SEE EIR | [illegible] | 4-5-68 | [illegible] |

L INITL SELECTION FF (VISEL) 963,966,969,967
H INITL SELECTION FF (VISEL) 965,967,970,984
H DLYD TIMING CYCLE INITIATED BY COM OUT IN INITL SEL CONNECTION SEQ (VS2D) 967,969
L DLYD TIMING CYCLE INITIATED BY COM OUT IN INITL SEL CONNECTION SEQ (VS2D) 965,967
L TIMING CYCLE INITIATED BY COM OUT IN CONNECTION SEQ (VS2) 967,965,969
H TIMING CYCLE INITIATED BY COM OUT IN CONNECTION SEQ (VS2) 965
L PTP SELECTED (VPTSEL) 964,962,965,980
H PTP SELECTED (VPTSEL) 965,982,965,977,973,974
N CONNECTED FF (VS3) 970,963,965,967
L CONNECTED FF (VS3) 965,967,961,970
H INTERFACE CONNECTED (VS3A)
L DVCE ADRS→BUS IN (VDVIP) 957,965,967
H DVCE ADRS→BUS IN (VDVIN)
L GATE DATA REG→BUS IN(VIFIN) 957
M (SRV OUT+COM OUT), OPL IN(VSU) 961,970,971
L (SRV OUT+COM OUT), OPL IN(VS4) 972,963,966,970
L DLYD (SRV OUT+COM OUT)+OPL IN (VS4D) 970
H DLYD (SRV OUT+COM OUT)+OPL IN (VS4D) 967,970,972

TD A31 964040 VE13 — A
N B59 964041 VB30
N B24 964015 VB28
FF B59/B24 964004 VB24 964003 VC21 — INITIAL SELECT FF
FF B59/B24 964016 VB30 964014 VB28 — B2 FF
FF B45 964010 VD21 964011 VD21 — PAPER TAPE SELECTED FF
N B60 964025 VD30
INTERFACE CONNECTED FF
N B59 964042 VB30
DEV. ADR TO BUS IN
N B60 964031 VD34
N B59 964036 VB30
A B24 964046 VB28 — DATA BUFFERS IN BUS
OR B24 964035 VB28
N B48 964050 VD22
TD A31 964048 VE13 — A
OR B51 964002 VB22
A B51 964001 VB22
OR B51 964013 VB29
A B52 964012 VA30
OR B52 964008 VB17
A B52 964007 VB17
A B52 964006 VB17
A B51 964005 VE23
A B52 964020 VF21
A B52 964021 VF21
A B52 964022 VD18
A B43 964051 VB27
OR B52 964044 VB23
OR B52 964045 VB23
A B51 964033 VB29
A B52 964034 VA30
A B59 964030 VB3C

L OPL IN FF (VOPIN) 963
L SEL OUT (VSELO) 963
L PARITY CORRECT DVCE NUMBER ON BUS OUT (VACOMP) 962
H IMMEDIATE BUSY (VBUSY) 965
L CON OUT (VCOMO) 955
H POWER ON CLR IS ACTIVE (VCLRS) 974
H BUS OUT ? (VOBT) 955
L BUS OUT ? (VOBT) 955
H INST IS BEING EXECUTED (VACTIVE) 968
L ADRS OUT (VADRO) 955
H STAT REQ FF (VSTR) 967
H CON OUT (VCONOT) 955
VOPIND 963
L SRVCE OUT (VSERO) 955

PART NO.
IDENT NO. 3842964-00
FOR MATL REQUIREMENTS SEE L/ML-
L M REV LETTER CONTROLS DOCUMENT.

COMPANY CONFIDENTIAL INFORMATION
THIS DOCUMENT CONTAINS CONFIDENTIAL INFORMATION OF THE SPERRY RAND CORPORATION IN CONSIDERATION OF THE RECEIPT OF THIS DOCUMENT, THE RECIPIENT AGREES NOT TO REPRODUCE, COPY, USE OR TRANSMIT THIS DOCUMENT AND/OR THE INFORMATION THEREIN CONTAINED, IN WHOLE OR IN PART, OR TO SUFFER SUCH ACTION BY OTHERS, FOR ANY PURPOSE EXCEPT WITH THE WRITTEN PERMISSION, FIRST OBTAINED, OF SPERRY RAND CORPORATION, AND FURTHER AGREES TO SURRENDER SAME TO SPERRY RAND CORPORATION UPON DEMAND

UNLESS OTHERWISE SPECIFIED
DIMENSIONS IN INCHES TOL. ON 2 PLACE DECIMALS ± / 3 PLACE DECIMALS ± / ANGLES ± /
HOLE DIA. TOL. 0 THRU .250 +.003 −.002; .251 THRU .500 +.005 −.003; .501 AND LARGER ±.010 −.005
THREADS: EXT. CL 2A, INT CL 2B
COMMODITY CODE

LAYOUT B LINS — DATE 3/4/67
DRAFTSMAN [illegible] — 3/6/67
CHECKER [illegible] MJ — 5/4/67
ENGINEER [illegible]
APPROVAL [illegible]
DO NOT SCALE THIS PRINT

CLASS A — UNIVAC DIVISION OF SPERRY RAND CORPORATION

TITLE: INITIAL SELECTION AND INPUT BUS CONTROLS

SIZE D — CODE IDENT NO. — DWG NO. 3842964
SCALE NONE — WEIGHT — SHEET 1 OF 1
A B C

DWG NO. 3842964

| REVISIONS | | | | | | |
|---|---|---|---|---|---|---|
| ZONE | LTR | EIR | DESCRIPTION — FOR DETAILS SEE EIR | CHK | DATE | APPROVED |
| | - | H 18603 - 1P | RELEASE | MS | 5-11-67 | GP |
| | A | H18669 - 3 | REV INPUT TO COMP 010, 032 | [illegible] | 11-1-67 | H.E.S. |
| | B | C 11418-2 | SEE EIR | [illegible] | [illegible] | [illegible] |

H COM IS TEST 10 (VTF)
L COM IS TEST 10 (VTF) 967
H PAR CORRECT FUNC ON BUS OUT (VEF)
L PAR CORRECT FUNC ON BUS OUT (VEF) (3839090 ●), 966, 969
H FUNC PAR ERR (VFEPE) 961, 968
H ADRS IN (VADRIN) 956
H PAPER TAPE BUSY INHIBIT (VPTBI) 962
H IMMEDIATE BUSY (VBUSY) 964
L IMMEDIATE BUSY (VCUB) 957
H STAT IN (VSTIN) 968, 974
H DLYD STAT IN BUS (VSTIN) 956

N 859 965004 VD23
N 859 965003 VE21
A B51 965001 VE23
A B52 965002 VE22
N B60 965006 VD30
A B48 965005 VD22
A B48 965008 VD22
A 848 965014 VD22
OR B24 965011 VF22
A B52 965009 VE22
A B52 965010 VE22
N B24 965020 VD17
OR B24 965019 VD17
A B52 965015 VD14
A B51 965016 VF23
A B51 965017 VF23
A B52 965018 VD14
N B24 965029 VD17
A B24 965028 VD17
OR B52 965025 VD14
OR B52 965026 VD14
OR B52 965027 VD14
A 859 965036 VD23
N 859 965034 VD23
TD A31
OR 965035 VD24
OR B24 965033 VF22
A B52 965031 VE22
A B51 965032 VE23
A B51 965037 VE23

H BUS OUT 4 (VDB4) 955
H BUS OUT 5 (VDB5) 955
H BUS OUT 7 (VDB7) 955
H BUS OUT 6 (VDB6) 955
L ODD PAR BUS OUT (VDBODD) 961
H STAT REQ FF (VSTR) 967
L DLYD TIMING CYCLE INITIATED BY COM OUT IN CONNECTION SEQ (VS20) 964
H ODD PAR BUS OUT (VDBODD) 961
H ADRS OUT (VADRO) 955
H INITL SELECTION FF (VISEL) 964
L TIMING CYCLE INITIATED BY COM OUT IN CONNECTION SEQ (VS2) 964
L DVCE ADRS → BUS IN (VDVIN) 964
H CONNECTED FF (VS3) 964
L INST IN BEING EXECUTED (VACTIVE) 968
H PTP SELECTED (VPTSEL) 964
L BUS OUT 7 (VDB7) 955
L STAT REQ FF (VSTR) 967
L PAPER TAPE SELECTED (VPTSEL) 964
L ASSYNCHRONOUS START SYNC FF (VSTARTS) 966
H PARITY CORRECT DVCE NUMBER ON BUS OUT (VACONF) 962
H SEL OUT (VSELO) 963
H COM OUT RESPONSE TO STAT (STACK STATUS) (VS10) 967
L CONNECTED FF (VS3) 964
H STAT ACK (SRV OUT RESPONSE TO STAT) (VSAK) 967
H OFF LINE FF (VOFLF) 971
H TIMING CYCLE INITIATED BY COM OUT IN CONNECTION SEQ (VS2) 964

NOTE:
1. ● INDICATES CARD NOTCH FEATURE F1174-00.

COMPANY CONFIDENTIAL INFORMATION
THIS DOCUMENT CONTAINS CONFIDENTIAL INFORMATION OF THE SPERRY RAND CORPORATION. IN CONSIDERATION OF THE RECEIPT OF THIS DOCUMENT, THE RECIPIENT AGREES NOT TO REPRODUCE, COPY, USE OR TRANSMIT THIS DOCUMENT AND/OR THE INFORMATION THEREIN CONTAINED, IN WHOLE OR IN PART, OR TO SUFFER SUCH ACTION BY OTHERS, FOR ANY PURPOSE, EXCEPT WITH THE WRITTEN PERMISSION, FIRST OBTAINED, OF SPERRY RAND CORPORATION, AND FURTHER AGREES TO SURRENDER SAME TO SPERRY RAND CORPORATION UPON DEMAND.

PART NO.
IDENT NO.

FOR MATL REQUIREMENTS SEE L/M, L/M REV LETTER CONTROLS DOCUMENT.

| UNLESS OTHERWISE SPECIFIED | | | LAYOUT | DATE | CLASS |
|---|---|---|---|---|---|
| DIMENSIONS IN INCHES TOL. ON 2 PLACE DECIMALS ± | 3 PLACE DECIMALS ± | ANGLES ± | B. MOORE | 2-4-67 | A |
| HOLE DIA. TOL. 0 THRU .250 + .003 − .002 | .251 THRU .500 + .005 − .003 | .501 AND LARGER + .010 − .005 | DRAFTSMAN Bernie Thorpe | 2-4-67 | |
| THREADS: EXT. CL 2A, INT CL 2B | | | CHECKER M. L. Pendry MS | 5/1/67 | |
| COMMODITY CODE | | | ENGINEER J. F. Hannin | 5/1/67 | |
| | | | APPROVAL [illegible] | 5/19/67 | |

DO NOT SCALE THIS PRINT

UNIVAC
DIVISION OF SPERRY RAND CORPORATION

TITLE
ADDRESS IN, STATUS IN, TEST FUNCTION

| SIZE | CODE IDENT. NO. | DWG NO. |
|---|---|---|
| D | | 3842965 |

SCALE | WEIGHT | SHEET 1 OF 1

DWG NO. 3842965

| REVISIONS | | | | | | |
|---|---|---|---|---|---|---|
| ZONE | LTR | EIR | DESCRIPTION – FOR DETAILS SEE EIR | CHK | DATE | APPROVED |
| | - | H18603-1P | RELEASE | MS | 5/4/67 | GJS |
| | A | H-18667-2 | ADDED 974 TO OUTPUT OF COMP. 080. REVISED TITLE ON COMP. 015. | MS | 5-31-67 | GJS |
| | B | CR01215-1 | SEE EIR | [illegible] | 7/4/68 | [illegible] |
| | C | 11418-2 C | SEE EIR | [illegible] | 2/26/69 | [illegible] |
| | D | 15886-1 C | SEE EIR | MS | 9/5/72 | GJS |
| | E | 23470-1 F | ADDED PAGE 973 TO OUTPUT OF 068 | MS | 2/26/73 | JRC |

NOTE:
1. ● INDICATES CARD NOTCH FEATURE F1174-00.

H INVALID FUNC → SET UNIT CK FF (VINVFF) 968
H INVALID FUNC SENSE FF (VINVF) 958
L INVALID FUNC SENSE FF (VINVF) 958
L FEED CARD ONLY-NO DATA TRANS (VFONLY) 966
H CLR SENSE FF'S (VCLSENS) 961,968
L ASSYNCHRONOUS START SYNC FF (VSTARTS) 965
H ASSYNCHRONOUS START SYNC FF (VSTARTS) 974
L SYNCHRONIZED START SYNC FF (VSTART) 968,971
H SYNCHRONIZED START SYNC FF (VSTART) 972
H CLR; GENERATED MANUALLY + SELECTIVE RESET + CHAN CLR (VCLR) 963,967,968,971,972,973,978,994,970
H CLR; GENERATED MANUALLY + SELECTIVE RESET + CHAN CLR (VCLRA) 961,968,974
L CLR; GENERATED MANUALLY + SELECTIVE RESET + CHAN CLR (VCLR) (3839090 ●), 969,967,974,973

INVALID FUNCTION SENSE FF — FF B48, B59 966062 VC32 / 966061 VC30; OR
START FF — FF B45 966032 VD21 / 966033 VD21
START SYNC FF — FF B45 966015 VC18 / 966020 VC18; OR
CLEAR FF — FF B60/B24 966068 VC31 / 966045 VC21
SELECTIVE RESET ALERT FF — FF B45 966050 VC18 / 966051 VC18; OR

L SET INITL SEL STAT REQ . TEST PUN . ERR SET CHAN END IF NO DATA TRANS (VS20D) 967
H A SENSE FF IS SET (VUNCK) 968
L INITL SELECTION FF (VISEL) 964
L ADRS OUT (VADRO) 965
L PAR CORRECT FUNC ON BUS OUT (VEF) 965
H A COM REQUIRING A CARD FEED HAS BEEN ACCEPTED (VFCARD) 969
H UNLOAD BUFF COM ACCEPTED (VRBUF) 969
H A SENSE COM HAS BEEN ACCEPTED (VSENSE) 969
H LOAD BUFF COM HAS BEEN ACCEPTED (VLBUF) 966
L CLOCK OUPT TP3 (VTP3) 969
H HOP ENT + STKR FULL + STKR JAM + CHPS FULL + INTLK (VPABS) 974
L (SRV OUT + COM OUT) . OPLIN (VSN) 961
L STAT ACK; SRV OUT RESPONSE TO STAT (VSAK) 967
L CLOCK OUPT TP6 (VTP6) 969
H STAT ACK (SRV OUT RESPONSE TO STAT) (VSAKF) 967
VOFLF 974
VOFL 974
H SUP OUT (VSUPO) 965
H OPL OUT (VOPOUT) 965
H POWER ON CLR IS ACTIVE (/CLRSW) 974
H OFF LINE FF (VOFLF) 974
L OPL IN FF DLYD (VOPIND) 963
L SUP OUT (VSUPO) 965
L OPL IN + INTERFACE CONNECTED FF (VOPIN8) 963

COMPANY CONFIDENTIAL INFORMATION
THIS DOCUMENT CONTAINS CONFIDENTIAL INFORMATION OF THE SPERRY RAND CORPORATION. IN CONSIDERATION OF THE RECEIPT OF THIS DOCUMENT, THE RECIPIENT AGREES NOT TO REPRODUCE, COPY, USE OR TRANSMIT THIS DOCUMENT AND/OR THE INFORMATION THEREIN CONTAINED, IN WHOLE OR IN PART, OR TO SUFFER SUCH ACTION BY OTHERS, FOR ANY PURPOSE EXCEPT WITH THE WRITTEN PERMISSION, FIRST OBTAINED, OF SPERRY RAND CORPORATION, AND FURTHER AGREES TO SURRENDER SAME TO SPERRY RAND CORPORATION.

UNLESS OTHERWISE SPECIFIED
DIMENSIONS IN INCHES TOL. ON 2 PLACE DECIMALS ± / 3 PLACE DECIMALS ± / ANGLES ±
HOLE DIA. TOL. 0 THRU .250 +.003 −.002 / .251 THRU .500 +.005 −.003 / .501 AND LARGER .010 −.005
THREADS: EXT. CL 2A, INT CL 2B
COMMODITY CODE

LAYOUT H. PORTER
DRAFTSMAN
CHECKER
ENGINEER
APPROVAL

DATE 9/6/67 / 9/8/67
CLASS A

UNIVAC
DIVISION OF SPERRY RAND CORPORATION

TITLE
START, RESET, INVALID FUNCTION

SIZE D | CODE IDENT. NO. | WG NO. 3842966
SCALE NONE | WEIGHT | SHEET 1 OF 1

PART NO.
IDENT NO. 384-2966-00

~~FOR MATL REQUIREMENTS SEE L/M, L/M REV LETTER CONTROLS DOCUMENT~~

DO NOT SCALE THIS PRINT

DWG NO. 3842966

| REVISIONS | | | | | | |
|---|---|---|---|---|---|---|
| ZONE | LTR | EIR | DESCRIPTION — FOR DETAILS SEE EIR | CHK | DATE | APPROVED |
| | - | H18603-1P | RELEASE | MJ | 5-11-67 | GJH |
| | A | H18669-2 | ADDED 974 TO OUTPUT OF COMP 008. REVISED OUPT & TITLE OF COMP 034 | MJ | 5-26-67 | GJH |

L SET INITL SEL STAT REQ-TEST PUN ERR-SET CHAN END IF NO DATA TRANS (VS20D) 966,968

L STAT REQ FF (VSTR) 963,965

H STAT REQ FF ($\overline{VSTR}$) 974,964,965

H STAT REQ FF + STACK STAT FF ($\overline{VSTAT}$) 970

L STAT REQ FF + STACK STAT FF (VSTAT) 965,970

H COM OUT RESPONSE TO STAT (STACK STATUS) (VSTCO) 965

L STAT ACK (SRV OUT RESPONSE TO STAT) (VSAK) 966,968

H STAT ACK (SRV OUT RESPONSE TO STAT) ($\overline{VSAK}$) 965,968

H STAT ACK (SRV OUT RESPONSE TO STAT) ($\overline{VSAKF}$) 966

L PENDING STAT FF (VPEN) 968

L INHT STAT IN FF (VINHST) 959

H INHT STAT IN FF ($\overline{VINHST}$) 970

FF 859, B24 967009 VE28 967007 VC21

OR

N B24 967008 VC21

(VC21) (VE28)

OR B51 967006 VC10

A B52 967003 VB21

A B52 967004 VB21

A B52 967010 VD40

A B52 967005 VB21

A B52 967017 VD15

N 859 967019 VB24

OR B24 967018 VC21

A B52 967015 VB23

A B32 967016 VB23

A B48 967014 VB27

FF B59, B59 967013 VB24 967012 VB24

A B48 967011 VB27

N 859 967035 VB24

FF B45/B45 967034 VC18 967033 VC18

TD A31 967026 VC24

OR

A B59 967025 VB24

FF B45/B45 967046 VC07 967045 VC07

OR

OR

A B52 967030 VB21

A B51 967031 VC23

A B52 967039 VD15

A B51 967040 VC23

A B51 967041 VC23

A B52 967042 VB21

FF B45/B45 967060 VC22 967061 VC22

OR

OR

A B52 967053 VB23

A B51 967052 VB22

A B52 967054 VB23

A B51 967051 VB22

A B52 967050 VB21

TD A31 967001 VC24

OR

H DLYD TIMING CYCLE INITIATED BY COM OUT IN INITL. SEL CONNECTION SEQ ($\overline{VS2D}$) 964

H CLR: GENERATED MANUALLY AND SELECTIVE RESET + CHAN CLR (VCLR) 966

H OFF LINE FF (VOFLF) 974

L DLYD TIMING CYCLE INITIATED BY COM OUT IN INITL SEL CONNECTION SEQ (VS2D) 964

L CHAN END (VCHEND) 968

H CHAN END (SRV OUT + COM OUT) OPL IN (VSHD) 964

H TERM DATA TRANS (NORMAL + PAR ERR + INTERFACE DISCONNECT) (VTERM) 970

L INST COMPLETED (VDVEND) 968

H INST IS BEING EXECUTED ($\overline{VACTIVE}$) 968

L SUP OUT (VSUPO) 955

H CONNECTED FF ($\overline{VS3}$) 964

L COM OUT (VCOMO) 965

L CONNECTED FF (VS3) 964

H (SRV OUT + COM OUT) OPL IN (VSH) 964

L SRVCE OUT (VSERO) 955

H INITL SELECTION FF ($\overline{VISEL}$) 964

L DVCE ADRS → BUS IN (VDVIN) 964

L INITL SELECTION FF (VISEL) 964

L TIMING CYCLE INITIATED BY COM OUT IN CONNECTION SEQ (VS2) 964

L BUS OUT 2 (VO82) 955

H BUS OUT 3 (VO83) 955

L CLR GENERATED MANUALLY + SELECTED RESET + CHAN CLR (VCLR) 966

L COM IS TEST 10 (VTF) 965

L BUS OUT 3 (VO83) 955

H BUS OUT 2 ($\overline{VO82}$) 955

DWG NO. 3842967

IDENT NO. 3842967-00

~~FOR MATL REQUIREMENTS SEE L/M, L/M REV LETTER CONTROLS DOCUMENT.~~


COMPANY CONFIDENTIAL INFORMATION

THIS DOCUMENT CONTAINS CONFIDENTIAL INFORMATION OF THE SPERRY RAND CORPORATION. IN CONSIDERATION OF THE RECEIPT OF THIS DOCUMENT, THE RECIPIENT AGREES NOT TO REPRODUCE, COPY, USE OR TRANSMIT THIS DOCUMENT AND/OR THE INFORMATION THEREIN CONTAINED, IN WHOLE OR IN PART, OR TO SUFFER SUCH ACTION BY OTHERS, FOR ANY PURPOSE, EXCEPT WITH THE WRITTEN PERMISSION, FIRST OBTAINED, OF SPERRY RAND CORPORATION, AND FURTHER AGREES TO SURRENDER SAME TO SPERRY RAND CORPORATION UPON DEMAND.


UNLESS OTHERWISE SPECIFIED
DIMENSIONS IN INCHES TOL. ON
2 PLACE DECIMALS ± | 3 PLACE DECIMALS ± | ANGLES ±
HOLE DIA. TOL.
0 THRU .250 + .003 − .002 | .251 THRU .500 + .005 − .003 | .501 AND LARGER + .010 − .005
THREADS: EXT. CL 2A, INT CL 2B
COMMODITY CODE

| | | DATE |
|---|---|---|
| LAYOUT | H. PORTER | 3-8-67 |
| DRAFTSMAN | H. Porter | 3-8-67 |
| CHECKER | M. Healey | 5/11/67 |
| ENGINEER | J. P. Hamil | 5/11/67 |
| APPROVAL | G. Yerby | 5/24/67 |

CLASS A

UNIVAC
DIVISION OF SPERRY RAND CORPORATION

TITLE: STATUS CONTROLS FFS

SIZE D | CODE IDENT. NO. | DWG NO. 3842967

SCALE | WEIGHT | SHEET 1 OF 1

DO NOT SCALE THIS PRINT

| ZONE | LTR | ECO | DESCRIPTION -- FOR DETAILS SEE EIR | CHK | DATE | APPROVED |
|---|---|---|---|---|---|---|
| | - | [illegible] | RELEASE | MJ | 4/14/67 | CJD |
| | A | M-18817 -1 | REV. INP ON COMP 017 & 053 | MJ | 7-24-67 | CJD |
| | B | M-18818 -2 | REV. COMP SET, ADD. [illegible] COMP. | CJD | 10-17-67 | [illegible] |
| | C | [illegible] | SEE EIR | [illegible] | [illegible] | [illegible] |
| | D | 1578846-1 | SEE EIR | [illegible] | 4/5/72 | CJK |
| | E | 29470 | DELETED GATE 968055 | [illegible] | [illegible] | MAC |
| | F | FZ9977 -1 | REVISED INPUT PIN #12 OF LOGIC BLK 052 | [illegible] | [illegible] | MAC |

H DATA TRANS NOT COMPLETED BEFORE CYCLE START (VDLATE)
L DATA TRANS NOT COMPLETED BEFORE CYCLE START (VDLATE) 959
H PTP DATA LATE (VPTLATE) 994
H A SENSE FF IS SET (VUNCK) 966
L A SENSE FF IS SET (VUNCK) 959
H CHAN END (VCHEND) 961
L CHAN END (VCHEND) 959, 967
H PTP END→DVCE END (VPTEND) 994
H DVCE END (VDVEND) 974, 994
L DVCE END (VDVEND) 967, 969
H STAT ACK AT CONCLUSION OF CON (VSAKC) 978
L INST EXECUTION INITIATED (VINSTR) 980, 97, 1, 973, 994
OR WIRE
L INST IS BEING EXECUTED (VACTIVE) 965
H INST IS BEING EXECUTED (VACTIVE) 959, 984, 967, 974

FF B48/B59 968002 VA32 968003 VA33
OR B59 968001 VA33
A B59 968001 VA33
A B90 968006 VB37
OR B59 968004 VE21
OR B51 968040 VB29
OR B51 968041 VB29
A B88 968005 VA32
OR B51 968042 VB30
FF B48/B59 968043 VB27 968042 VB30
FF B48/B48 968051 VA31 968050 VA31
FF B48/B48 968054 VA31 968053 VA31
N B24 968012 VC37
N B24 968019 VD42
A B43 968022 VA32
OR B24 968011 VC37
OR B88 968018 VB42
A B51 968007 VC39
A B51 968008 VC39
A B52 968009 VD40
A B51 968015 VD39
A B52 968016 VD40
A B52 968017 VD40
FF B45 968026 VA35 968027 VA35
OR B51 968024 VA36
A B52 968023 VA30
A B52 968035 VE29
FF B45 968033 VA35 968034 VA35
A B52 968032 VA30
A B51 968031 VA36
OR B52 968030 VA30

H CLR SENSE FF'S (VCLSENS) 966
H CLR GENERATED MANUALLY + SELECTIVE RESET + CHAN CLR (VCLR) 966
L LOAD BUFF COM HAS BEEN ACCEPTED (VLBUF) 969
L CARD BEING PROCESSED (CYCLE START→ROW 12) (VONL) 973
H CARD JAM AT STATION 2 PCL (VAJAM) 974
H CARD JAM AT STATION 4 PCL (VBJAM) 974
L SET INITL SEL STAT REQ; TEST PUN ERR + SET CHAN END IF NO DATA TRANS (VS2DD) 967
H FUNC PAR ERR (VFPER) 985
H INVALID FUNC→SET UNIT CK FF (VINVFF) 966
L PUN ERR OTHER THAN HOLE COUNT (VPABM2) 974
L A COM REQUIRING A CARD FEED HAS BEEN ACCEPTED (VFCARD) 969
H PUN ERR OTHER THAN HOLE COUNT (VPABM2)
L FEED CARD ONLY - NO DATA TRANS (VFONLY) 965
H PARTIAL BUFF LOAD (BINARY ZERO→REMAINING LOCATIONS) (VPTLBT) 966
L BUFF LOAD IS COMPLETED (VLEND) 971
L CLOCK OUPT TPU (VTPU) 989
H BUS OUT PAR ERR (DATA) (VOBEP) 981
H TDM DATA TRANS (NORMAL + PAR ERR + INTERFACE DISCONNECT) (VTYERR) 970
L BUFF CYCLE CONTROL FF (VNC) 980
H A COM REQUIRING A CARD FEED HAS BEEN ACCEPTED (VFCARD) 969
L DATA ACK (VDACK) 970
L UNLOAD BUFF + SENSE (UNLOAD BUFF + SENSE) DATA TRANSFERS COMPLETED (VREND) 971
L UNLOAD BUFF + SENSE COM ACCEPTED (VREAD) 969
L TDM DATA TRANS (NORMAL + PAR ERR + INTERFACE DISCONNECT) (VTERR) 979
H PUN END (0→POST PUNCH CYCLE STR→SYNC END) (VPEND) 978
L STAT ACK (SRV OUT RESPONSE TO STAT) (VSAK) 967
H HOLE COUNT ERR (VOHEY) 978
L SYNCHRONIZED START SYNC FF (VSTART) 966
H DATA ACK (VDACK) 971, 970
H STAT IN (VSYINT) 985
H ADRS OUT (VADRO) 985
H STAT ACK (SRV OUT RESPONSE TO START) (VSAK) 967
H DATA REQ (VFDRQ) 973
H CLR: GENERATED MANUALLY + SELECTIVE RESET + CHAN CLR (VCLR) 966
H INS EXECUTION INITIATED (VINSTR) 973

COMPANY CONFIDENTIAL INFORMATION
THIS DOCUMENT CONTAINS CONFIDENTIAL INFORMATION OF THE SPERRY RAND CORPORATION. IN CONSIDERATION OF THE RECEIPT OF THIS DOCUMENT, THE RECIPIENT AGREES NOT TO REPRODUCE, COPY, USE OR TRANSMIT THIS DOCUMENT AND/OR THE INFORMATION THEREIN CONTAINED, IN WHOLE OR IN PART, OR TO SUFFER SUCH ACTION BY OTHERS, FOR ANY PURPOSE, EXCEPT WITH THE WRITTEN PERMISSION, FIRST OBTAINED, OF SPERRY RAND CORPORATION, AND FURTHER AGREES TO SURRENDER SAME TO SPERRY RAND CORPORATION

UNLESS OTHERWISE SPECIFIED
DIMENSIONS IN INCHES TOL. ON 2 PLACE DECIMALS ± .03, 3 PLACE DECIMALS ± .010, ANGLES ±
HOLE DIA. TOL. 0 THRU .250 + .003 − .002; .251 THRU .500 + .005 − .003; .501 AND LARGER + .010 − .005
THREADS: EXT. CL 2A, INT CL 2B
COMMODITY CODE

| | | |
|---|---|---|
| LAYOUT | H PORTER | DATE 2-14-67 |
| DRAFTSMAN | A. Ballerini | 4/6/67 |
| CHECKER | M. F. Hawley MJS | 5-14-67 |
| ENGINEER | [illegible] | 5/11/67 |
| APPROVAL | [illegible] | 7/14/67 |
| | | 7/31/67 |

DO NOT SCALE THIS PRINT

PART NO. 3842968-00
FOR MATL REQUIREMENTS SEE L/M, L/M REV LETTER CONTROLS DOCUMENT.

UNIVAC
DIVISION OF SPERRY RAND CORPORATION

TITLE: STATUS FLIP-FLOPS

CLASS A | SIZE D | CODE IDENT. NO. | DWG NO. 3842968 | SCALE | WEIGHT | SHEET 1 OF 1

DWG NO. 3842968

| REVISIONS | | | | | | |
|---|---|---|---|---|---|---|
| ZONE | LTR | EIR | DESCRIPTION — FOR DETAILS SEE EIR | CHK | DATE | APPROVED |
| | - | H18603-1P | RELEASE | MJ | 5-11-67 | |
| | A | H-18817-1 | REVISED INPUT ON COMP 013 | MJ | 7-28-67 | |
| | B | 114218-2 | SEE EIR | | 5/16/69 | |

NOTES:

1. COMMAND REJECT = $\overline{\text{SENSE}}$. $\overline{\text{FEED}}$. $\overline{\text{READ BUFFER}}$. $\overline{\text{LOAD BUFFER}}$
2. ● INDICATES CARD NOTCH FEATURE F1174-1.

L A SENSE COM HAS BEEN ACCEPTED (VSENSE) 970,971
H A SENSE COM HAS BEEN ACCEPTED (VSENSE) 957,966,980,984,986
L UNLOAD BUFF+SENSE COM ACCEPTED (VREAD) 968,971,972
L UNLOAD BUFF COM ACCEPTED (VRBUF) 972,970,971,984
H UNLOAD BUFF COM ACCEPTED (VRBUF) 957,966
L A COM REQUIRING A CARD FEED HAS BEEN ACCEPTED (VFCARD) 968,973
H A COM REQUIRING A CARD FEED HAS BEEN ACCEPTED (VFCARD) 966,968
L PUN COM ACCEPTED (VPUNCH) (3839090 ● ), 976,980
H PUN COM ACCEPTED (VPUNCH) 972
L LOAD BUFF COM HAS BEEN ACCEPTED (VLBUF) 968,994,961,970,971,972,984
H LOAD BUFF COM HAS BEEN ACCEPTED (VLBUF) 966
L A SEL STKR COM HAS BEEN ACCEPTED (VSELS) 974
H A SEL STKR COM HAS BEEN ACCEPTED (VSELS)
L DATA TRANS IN IMAGE MODE (VIMAGE) 970,972
H DATA TRANS IN IMAGE MODE (VIMAGE) 970,972,971
L RD PUN BUFF; LOAD READ BUFF; R2 BRUSHES (VFFO) 970,972,971
H RD PUN BUFF; LOAD READ BUFF; R2 BRUSHES (VFFO) 972,984
L CARD FEED BUFF IF 972,984

SENSE
READ BUFFER
FEED CARD
PUNCH
LOAD BUFFER OR PUNCH PTP
SELECT STACKER
IMAGE MODE
POST READ TO PUNCH BUFFER (OFF LINE FEED)
READ PUNCH BUFFER OR LOAD READ BUFFER (BUFFER MEMORY TEST)

L CLR (GENERATED MANUALLY + SELECTIVE RESET+CHAN CLR) (VCLR) 966
L INITL SELECTION FF (VISEL) 964
H DLYD TIMING CYCLE INITIATED CONN OUT IN INTL SEL CONN SEQ (VS2D) 964
L TIMING CYCLE INITIATED BY CON OUT IN CONNECTION SEQ. (VS2) 964
L PAR CORRECT FUNC ON BUS OUT (VEF) 965
H BUS OUT 4 (VOB4) 955
L BUS OUT 5 (VOB5) 955
H BUS OUT 6 (VOB6) 955
H BUS OUT 7 (VOB7) 955
L BUS OUT 6 (VOB6) 955
H PTP SELECTED (VPTSEL) 964
L BUS OUT 4 (VOB4) 955
L BUS OUT 7 (VOB7) 955
L BUS OUT 3 (VOB3) 955
H PUN CARDS OFF LINE (VOFLP) 973
L BUFF LOAD IS COMPLETED (VLEND) 971
L CLOCK OUPT TP1 (VTP1) 989
L BUS OUT 2 (VOB2) 955
L BUS OUT 5 (VOB5) 955
L BUS OUT 0 (VOB0) 955
H MAINTENANCE SW. (SWAP BUFFER FUNCTIONS) (VSFFO) 973
L OFF LINE FF (VOFLF) 974

PART NO.
IDENT NO. 3842969-00

FOR MATL REQUIREMENTS SEE L/M; L/M REV LETTER CONTROLS DOCUMENT.

COMPANY CONFIDENTIAL INFORMATION
THIS DOCUMENT CONTAINS CONFIDENTIAL INFORMATION OF THE SPERRY RAND CORPORATION. IN CONSIDERATION OF THE RECEIPT OF THIS DOCUMENT, THE RECIPIENT AGREES NOT TO REPRODUCE, COPY, USE OR TRANSMIT THIS DOCUMENT AND/OR THE INFORMATION THEREIN CONTAINED, IN WHOLE OR IN PART, OR TO SUFFER SUCH ACTION BY OTHERS, FOR ANY PURPOSE, EXCEPT WITH THE WRITTEN PERMISSION, FIRST OBTAINED, OF SPERRY RAND CORPORATION, AND FURTHER AGREES TO SURRENDER SAME TO SPERRY RAND CORPORATION UPON DEMAND.

UNLESS OTHERWISE SPECIFIED
DIMENSIONS IN INCHES TOL ON 2 PLACE DECIMALS ± / 3 PLACE DECIMALS ± / ANGLES ± /
HOLE DIA. TOL. 0 THRU .250 + .003 − .002 / .251 THRU .500 + .005 − .003 / .501 AND LARGER + .010 − .005
THREADS: EXT. CL 2A, INT CL 2B
COMMODITY CODE

| | | |
|---|---|---|
| LAYOUT | W. FITZGERALD | 3-4-67 |
| DRAFTSMAN | Wm. Fitzgerald | 3-6-67 |
| CHECKER | MJ M.J. Hawke | 5/4/67 |
| ENGINEER | J.F. Hamm | 5/4/67 |
| APPROVAL | a Yaling | 5/4/67 |

DO NOT SCALE THIS PRINT

CLASS A

UNIVAC
DIVISION OF SPERRY RAND CORPORATION

TITLE: FUNCTION REGISTER

SIZE D | CODE IDENT. NO. | DWG NO. 3842969

SCALE NONE | WEIGHT | SHEET 1 OF 1

DWG NO. 3842969

| SYMBOL | DWG. NO. | DESCRIPTION – THIS DRAWING WAS RELEASED | BY | DATE | APPROVED |
|---|---|---|---|---|---|
| - | [illegible] | ORIGINAL RELEASE | MJ | 6/1/67 | [illegible] |
| A | 11-168117 | REV PER ECN COMP. 824,000, 007, 031 & 032 | MJ | 7-10-67 | [illegible] |
| B | 2B0094 | SEE ECR | [illegible] | 11-17-67 | [illegible] |
| C | 2B2977 -1 | ADDED SNT 968 TO OUTPUT PIN OF BLOCK 010 | [illegible] | 3/11/71 | JAC |

L TERM DATA TRANS (NORMAL+PAR ERR +INTERFACE DISCONNECT) (VTERM) 966,971,994

H TERM DATA TRANS (NORMAL+PAR ERR +INTERFACE DISCONNECT) (VTERM) 967,968,971

H SRV IN (VSERVIN) 966

L DATA REQ (VDRQ) 961

H DATA REQ (VDRQ) 961,

L DATA ACK (VDACK) 961,966

H DATA ACK (VDACK) 971,988

L DATA BYTE ON BUS OUT (VDLOK) 971

H DATA BYTE ON BUS OUT (VDLOK)

H REQ IN (VSRQB) 986

L REQUEST IN (VSRQ) 983

H REQUEST IN (VSRQ) 983

L INITL SELECTION+STAT REQ (VTIBSTA) 986,988

H INITL SELECTION+STAT REQ (VTIBSTA) 987

L SENSE BYTE 1 → BUS IN DATA GATES (VSBIB1) 968,969

L SENSE BYTE 2 → BUS IN DATA GATES (VSBIB2) 968,969

L COMPRESS MODE FOR UNLOAD BUFFER (VINCMP) 968,969

DATA REQ IMAGE INF → BUS IN DATA GATES (VIINIM) 968,988

L PAR ERR DATA TRANS CHAN → SUBSYSTEM) (VPARE) 961

L LOAD BUFF COM HAS BEEN ACCEPTED (VLBUF) 969

L ADRS OUT (VADRO) 955

H SEL OUT (VSELO) 963

L OPL IN FF DLYD (VOPIND) 963

L COM OUT (VCOMO) 968

L OPL IN + INTERFACE CONNECTED FF (VOPINB) 963

H STAT REQ FF + STACK STAT FF (VSTAT) 967

L DLYD (SRV OUT + COM OUT) • OPL IN (VSND) 964

L CLR: GENERATED MANUALLY + SELECTIVE RESET + CHAN CLR (VCLR) 966

L CONNECTED FF (VSI) 964

L DATA REQ FF (VNEED) 971

H (SRV OUT + COM OUT)-OPL IN (VSIB) 964

H DATA REQ FF (VNEED) 971

H DLYD (SRV OUT + COM OUT)-OPL IN (VSIB) 964

L (SRV OUT + COM OUT)-OPLIN (VSI) 964

H BLOCK REQ IN (VBLSRQ) 962

H CONNECTED FF (VSI) 964

L STAT REQ FF + STACK STAT FF (VSTAT) 967

H INHT STAT IN FF (VINHST) 967

H INITL SELECTION FF (VTISEL) 964

H MEM ADRS CNTR 6 (VMAC6) 966

L A SENSE COM HAS BEEN ACCEPTED (VSENSE) 969

L MEM ADRS CNTR 6 (VMAC6) 966

H DATA TRANS IN IMAGE MODE (VINAGE) 969

L UNLOAD BUFF COM ACCEPTED (VRBUF) 969

L DATA TRANS IN IMAGE MODE (VIMAGE) 969

DWG NO. 3842970

COMPANY CONFIDENTIAL INFORMATION
THIS DOCUMENT CONTAINS CONFIDENTIAL INFORMATION OF THE SPERRY RAND CORPORATION. IN CONSIDERATION OF THE RECEIPT OF THIS DOCUMENT, THE RECIPIENT AGREES NOT TO REPRODUCE, COPY, USE OR TRANSMIT THIS DOCUMENT AND/OR THE INFORMATION THEREIN CONTAINED, IN WHOLE OR IN PART, OR TO SUFFER SUCH ACTION BY OTHERS, FOR ANY PURPOSE EXCEPT WITH THE WRITTEN PERMISSION, FIRST OBTAINED, OF SPERRY RAND CORPORATION, AND FURTHER AGREES TO SURRENDER SAME TO SPERRY RAND CORPORATION.

UNLESS OTHERWISE SPECIFIED
DIMENSIONS IN INCHES TOL ON: 2 PLACE DECIMALS ± .03; 3 PLACE DECIMALS ± .010; ANGLES ±
ROUGH MACH. SURF. 0 THRU .249 ± .005; .250 THRU .500 ± .005; .501 AND LARGER ± .010
THREADS: EXT. CL 2A, INT CL 2B
COMMODITY CODE

LAYOUT VIRGINIA THURSDAY 3/9/67
DRAFTSMAN 3/9/67
CHECKER MJ 5/1/67
ENGINEER 5/4/67
APPROVAL 5/10/67

DO NOT SCALE THIS PRINT

ISSUED UNDER DWG NO. 3842970-00

FOR MATL REQUIREMENTS SEE L/M, S/M REV LETTER GOVERNING DOCUMENT.

UNIVAC
DIVISION OF SPERRY RAND CORPORATION

CLASS A

TITLE: DATA CONTROL AND REQUEST IN

SIZE D | CODE IDENT. NO. | DWG NO. 3842970

SCALE | WEIGHT | SHEET 1 OF 1

| REVISIONS | | | | | |
|---|---|---|---|---|---|
| ZONE | LTR | EIR | DESCRIPTION — FOR DETAILS SEE EIR | CHK | DATE | APPROVED |
| | - | H18603 -1B | RELEASE | MS | 5/11/67 | |
| | A | H-18817 -1 | REV. INP. ON COMP. 020, 002, 007, 031 & 032 | | 7-28-67 | |
| | B | 15009-1 | SEE EIR | | 2-13-75 | |

L TERM DATA TRANS (NORMAL+PAR ERR +INTERFACE DISCONNECT) (VTERM) 968, 971, 964

H TERM DATA TRANS (NORMAL+PAR ERR +INTERFACE DISCONNECT) (VTERM) 967, 968, 971

N B59 970026 VD44

N B24 970025 VD46

OR B24 970024 VD45

OR B54 970027 VB46

A B51 970020 VC43

A B51 970021 VC43

A B51 970022 VC48

A B48 970030 VD36

H SRV IN (VSERVIN) 966

L DATA REQ (VDRQ) 961

H DATA REQ (VDRQ) 961

FF B45 970003 VC46

FF B45 970004 VC46

L DATA ACK (VDACK) 961, 958

N B59 970011 VB48

H DATA ACK (VGACK) 971

A B59 970010 VC49

L DATA BYTE ON BUS OUT (VDLOK) 971

H DATA BYTE ON BUS OUT (VDLOK)

FF B45 970008 VC46

FF B45 970009 VC46

H REQ IN (VSRQB) 956

A B59 970036 VF09

L REQUEST IN (VSRQ) 963

N B59 970015 VB48

H REQUEST IN (VSRQ) 963

OR B24 970014 VD42

L INITL SELECTION + STAT REQ (VINSTA) 958, 959

H INITL SELECTION + STAT REQ (VINSTA) 957

N B59 970017 VB48

L SENSE BYTE 1 → BUS IN DATA GATES (VSENS1) 958, 959

N B59 970040 VC49

A B48 970031 VF48

L SENSE BYTE 2 → BUS IN DATA GATES (VSENS2) 958, 959

N B59 970041 VB48

A B48 970032 VD48

L COMPRESS MODE FOR UNLOAD BUFFER (VINOMP) 958, 959

N B59 970043 VD37

A B48 970034 VD36

DATA REQ IMAGE INF → BUS IN DATA GATES (VINIM) 958, 959

N B59 970044 VD37

A B48 970035 VD36

OR B52 970002 VD47

A B51 970001 VC48

A B52 970007 VD47

A B52 970006 VD47

A B52 970012 VD47

A B51 970013 VC48

OR B59 970016 VB48

TB A31 970005 VD24 OR

L PAR ERR DATA TRANS (CHAN → SUBSYSTEM) (VPARE) 961

L LOAD BUFF COM HAS BEEN ACCEPTED (VLBUF) 969

L ADRS OUT (VADRO) 955

H SEL OUT (VSELO) 963

L OPL IN FF DLYD (VOPIND) 963

L COM OUT (VCOMO) 965

L OPL IN → INTERFACE CONNECTED FF (VOPINB) 963

H STAT REQ FF → STACK STAT FF (VSTAT) 967

L DLYD (SRV OUT + COM OUT) • OPL IN (VSND) 964

L CLR: GENERATED MANUALLY + SELECTIVE RESET + CHAN CLR (VCLR) 965

L CONNECTED FF (VS2) 964

L DATA REQ FF (VNEED) 971

H (SRV OUT + COM OUT) • OPL IN (VSN) 964

H DATA REQ FF (VNEED) 971

H DLYD (SRV OUT + COM OUT) • OPL IN (VSND) 964

L (SRV OUT + COM OUT) • OPLIN (VSN) 964

H BLOCK REQ IN (VBLSRQ) 962

P CONNECTED FF (VSS) 964

L STAT REQ FF + STACK STAT FF (VSTAT) 967

H INIT STAT IN FF (VINRST) 967

H INITL SELECTION FF (VISEL) 964

H MEM ADRS CNTR 6 (VMAC6) 965

L A SENSE COM HAS BEEN ACCEPTED (VSENSE) 969

L MEM ADRS CNTR 6 (VMAC6) 965

H DATA TRANS IN IMAGE MODE (VIMAGE) 969

L UNLOAD BUFF COM ACCEPTED (VRBUF) 969

L DATA TRANS IN IMAGE MODE (VIMAGE) 969

COMPANY CONFIDENTIAL INFORMATION
THIS DOCUMENT CONTAINS CONFIDENTIAL INFORMATION OF THE SPERRY RAND CORPORATION. IN CONSIDERATION OF THE RECEIPT OF THIS DOCUMENT, THE RECIPIENT AGREES NOT TO REPRODUCE, COPY, USE OR TRANSMIT THIS DOCUMENT AND/OR THE INFORMATION THEREIN CONTAINED, IN WHOLE OR IN PART, OR TO SUFFER SUCH ACTION BY OTHERS, FOR ANY PURPOSE, EXCEPT WITH THE WRITTEN PERMISSION, FIRST OBTAINED, OF SPERRY RAND CORPORATION, AND FURTHER AGREES TO SURRENDER SAME TO SPERRY RAND CORPORATION.

UNLESS OTHERWISE SPECIFIED
DIMENSIONS IN INCHES TOL. ON 2 PLACE DECIMALS ± / 3 PLACE DECIMALS ± / ANGLES ±
HOLE DIA. TOL.
0 THRU .250 + .003 − .002
.251 THRU .500 + .003 − .003
.501 AND LARGER + .013 − .005
THREADS: EXT. CL 2A, INT CL 2B
COMMODITY CODE

LAYOUT VIRGINIA THWREY 3/9/67
DRAFTSMAN 3/9/67
CHECKER 5/1/67
ENGINEER 5/4/67
APPROVAL 5/14/67

DO NOT SCALE THIS PRINT

~~PART NO.~~
IDENT NO. 3842970-00

~~FOR MATL REQUIREMENTS SEE L/M, L/M REV LETTER CONTROLS DOCUMENT~~

CLASS A

UNIVAC
DIVISION OF SPERRY RAND CORPORATION

TITLE
DATA CONTROL AND REQUEST IN

SIZE D | CODE IDENT. NO. | DWG NO. 3842970

SCALE NONE | WEIGHT | SHEET 1 OF 1

DWG NO. 3842970

| REVISIONS | | | | | | |
|---|---|---|---|---|---|---|
| ZONE | LTR | EIR | DESCRIPTION – FOR DETAILS SEE EIR | CHK | DATE | APPROVED |
| | - | H18603-1P | RELEASE | MJ | 5-24-67 | GJP |
| | A | H-18817-1 | REV COMP 035,001,015 & WIRE BLK | MJ | 9-26-67 | GJP |
| | B | 15009-1 | SEE EIR | MJ | 2-19-68 | JRB |

NOTE:
80 INDICATES FOR 80 COL. ONLY.

H INTERFACE BUFF SYNC FF "A" (VIFA) 972
L INTERFACE BUFF SYNC FF "A" (VIFA) 972,980
L INTERFACE BUFF SYNC FF B (VIFB) 972,984,986
H INTERFACE BUFF SYNC FF B (VIFB) 972
H UNLOAD BUFF+SENSE DATA TRANSFERS COMPLETED (VREED)
L UNLOAD BUFF+SENSE DATA TRANSFERS COMPLETED (VREED) 968
L DATA REQ FF (VNEED) 970,994
H DATA REQ FF (VNEED) 970,994
L BUFF LOAD IS COMPLETED (VLEND) 968,969
H PARTIAL BUFF LOAD (BINARY ZERO→REMAINING LOCATIONS) (VFILL) 968
L PARTIAL BUFF LOAD (BINARY ZERO→REMAINING LOCATIONS) (VFILL)
n BUFF LOAD IS COMPLETED (VLEND)
L LOAD BUFF WITH BUS OUT INFO (VLOAD) 972

H CLR: GENERATED MANUALLY + SELECTIVE RESET + CHAN CLR (VCLR) 966
H SERV OUT + COM OUT) + OPL IN (VSI) 964
H INHT MEM CYCLE WHEN TRANS PTP DATA (VPPTSE) 980
L DATA BYTE ON BUS OUT (VOLOK) 970
H DATA TRANS IN IMAGE MODE (VTIMGE) 969
L MEM ADRS CNTR Ø (VMACO) 986
L CLOCK OUPT TP4 (VTP4) 989
L CLOCK OUPT TP5 (VTP5) 989
L SYNCHRONIZED START SYNC FF (VSTART) 966
L UNLOAD BUFF+SENSE COM ACCEPTED (VREAD) 969
L CLOCK OUPT TP1 (VTP1) 989
L A SENSE COM HAS BEEN ACCEPTED (VSENSE) 969
L BUFF ADRS CNTR 6 (VMAC6) 986
L BUFF LOAD/UNLOAD COMPLETE (VMACBO) 965
L UNLOAD BUFF COM ACCEPTED (VRBUF) 969
H MEM ADRS CTR Ø (VMACO) 986
L INST EXECUTION INITIATED (VINSTR) 968
H DATA ACK (VDACK) 970
L CLOCK OUPT TPO (VTPO) 989
L LOAD BUFF COM HAS BEEN ACCEPTED (VLBUF) 969
L CLOCK OUPT TP6 (VTP6) 989
L BUFF CYCLE CONTROL FF (VMC) 980
L TERM DATA TRANS (NORMAL + PAR ERR + INTERFACE DISCONNECT) (VTERM) 970
H PTP SELECTED (VPTSEL) 964
H TERM DATA TRANS (NORMAL + PAR ERR + INTERFACE DISCONNECT) (VTERM) 970

COMPANY CONFIDENTIAL INFORMATION
THIS DOCUMENT CONTAINS CONFIDENTIAL INFORMATION OF THE SPERRY RAND CORPORATION. IN CONSIDERATION OF THE RECEIPT OF THIS DOCUMENT, THE RECIPIENT AGREES NOT TO REPRODUCE, COPY, USE OR TRANSMIT THIS DOCUMENT AND/OR THE INFORMATION THEREIN CONTAINED, IN WHOLE OR IN PART, OR TO SUFFER SUCH ACTION BY OTHERS, FOR ANY PURPOSE, EXCEPT WITH THE WRITTEN PERMISSION, FIRST OBTAINED, OF SPERRY RAND CORPORATION, AND FURTHER AGREES TO SURRENDER SAME TO SPERRY RAND CORPORATION

UNLESS OTHERWISE SPECIFIED
DIMENSIONS IN INCHES TOL. ON
2 PLACE DECIMALS ± / –
3 PLACE DECIMALS ± / –
ANGLES ± / –
HOLE DIA. TOL.
0 THRU .250 + .003 – .002
.251 THRU .500 + .005 – .003
.501 AND LARGER + .010 – .005
THREADS: EXT. CL 2A, INT CL 2B
COMMODITY CODE

LAYOUT B. LINS 5/10/67
DRAFTSMAN 5/10/67
CHECKER MJ 5/11/67
ENGINEER 5/11/67
APPROVAL 5/11/67

DO NOT SCALE THIS PRINT

PART NO.
IDENT NO. 3842971-00
FOR MATL REQUIREMENTS SEE L/M, L/M REV LETTER CONTROLS DOCUMENT.

CLASS A
UNIVAC
DIVISION OF SPERRY RAND CORPORATION

TITLE
BUFFER LOAD/ UNLOAD SEQUENCE

SIZE D | CODE IDENT NO. | DWG NO. 3842971
SCALE NONE | WEIGHT | SHEET 1 OF 1

DWG NO. 3842971

| REVISIONS | | | | | | |
|---|---|---|---|---|---|---|
| ZONE | LTR | EIR | DESCRIPTION — FOR DETAILS SEE EIR | CHK | DATE | APPROVED |
| | - | H18603-1P | RELEASE | MS | 5-4-67 | G.M. |
| | A | H-18817-1 | REV INP ON COMP 060, 040 & 041 | MS | 7-28-67 | G.M. |
| | B | H-18669-3 | RELOCATED INP ON "OR WIRE" COMP | MS | 10-16-67 | G.M. |

L RD BUFF SENSE AR→D REG (VM2TOD) 981,982,983 → N B24 972007 VE45 (10) → (18) A B24 972006 VE45 (18) → OR B52 972001 VE46 (18) → L SELECT PUN BUFF (VMSEL1) 984

L PUN BUFF SENSE AR→D REG (VM1TOD) 981,982,983 → N B24 972015 VD42 (08) → (01) A B24 972014 VD42 (01) → OR B52 972002 VE46 (17) → L LOAD BUFF COM HAS BEEN ACCEPTED (VLBUF) 969

L LOAD BUFF IMAGE MODE (VLIM) 981,982,983 → N B59 972021 VD37 (11) → A B48 972020 VC40 (10) → L LOAD BUFF WITH BUS OUT INFO (VLOAD) 971; L DATA TRANS IN IMAGE MODE (VIMAGE) 969

L LOAD BUFF COMPRESS MODE (VLEX) 981,982,983 → N B59 972023 VD37 (09) → A B48 972022 VC40 (09) → H DLYD (SRV OUT+COM OUT) • OPL IN (VSHD) 964; L (SRV OUT+COM OUT) • OPL IN (VSH) 964; H DATA TRANS IN IMAGE MODE (VIMAGE) 969

L Ø→D REG (VCLRD) 981,982,983 → A B24 972048 VD45 (07) → OR B52 972045 VC44 (16) → OR WIRE → A B59 972025 VD41 (09) → L INTERFACE/BUFF SYNC FF B (VIIFB) 971; H CLR: GENERATED MANUALLY + SELECTIVE RESET + CHAN CLR (VCLR) 966

H CLR DATA REG "B" (VCLRB) 981,982,983 → A B60 972056 VD34 (07) → OR B48 972055 VD36 (09) → OR WIRE → A B48 972027 VC40 (11) → H CLR THE "B" REG (VPTCLB) 994; H INTERFACE/BUFF SYNC FF A (VIIFA) 971

L B REG→BUFF WHEN LOADING COMPRESS MODE (VBTOM) 981,982,983 → N B60 972031 VD34 (06) → N B59 972036 VD37 (10) → L B REG→B REG (VDTOB) 981,982,983

L D REG→MEM (VDTOM) 981,982,983 → N B60 972032 VD34 (11)

H INHT RD BUFF RECIRCULATION (ROW 9#3) (VRR93) 981,982,983 → A B60 972060 VD34 (09)

L GATE RD INFO BUFF WRITE DRIVERS (VRTOM) 981,982,983 → OR B60 972042 VD34 (10) → OR B24 972061 VE45 (07)

L CARD BEING PROCESSED (CYCLE START→ROW 12) (VONL) 973; H CYCLE CTR FF "B" (VCCB) 976

L UNLOAD BUFF+SENSE COM ACCEPTED (VREAD) 969 → A B59 972026 VD44 (10)

L INTERFACE/BUFF SYNC FF A (VIFA) 971; H CLOCK OUPT TP 7 (VTP7) 989

H SYNCHRONIZED START SYNC FF (VSTART) 966 → A B48 972016 VA44 (08) → A B48 972028 VC40 (08) → A B48 972030 VD43 (10) → A B48 972035 VD43 (09)

H INTERFACE/BUFF SYNC FF B (VIIFB) 971; L CLOCK OUPT TP 7 (VTP7) 989

H MEM ADRS CTR Ø (VMACO) 986; L UNLOAD BUFF COM ACCEPTED (VRBUF) 969

L MEM ADRS CTR Ø (VMACO) 986; L CLOCK OUPT TP 4 (VTP4) 989

L PUN ROW CNTR ROW (9#3) (VROW93) 977; H PUN COM ACCEPTED (YPUNCH) 969; L RD PUN BUFF; LOAD RD BUFF; R2 BRUSHES→BUFF 1F CARD FEED (VFFO) 969; L SR→POST RD HOLE CNTR (VMCC2) 978

A B48 972040 VC32 (09) → H BUFF CYCLE CONTROL FF (VMC) 980; H PUN BUFF, LOAD RD BUFF, R2 BRUSHES→BUFF 1F CARD FEED (VFFO) 969; L SR→BUFF & PRE RD HOLE COUNT (VCC1) 976; H PUN CARDS OFF LINE (VOFLP) 969

A B51 972041 VE43 (02) → A B52 972062 VB50 (14)

DWG NO. 3842972

PART NO.

IDENT NO. 3842972 - 00

FOR MATL REQUIREMENTS SEE L/M, L/M REV LETTER CONTROLS DOCUMENT.

COMPANY CONFIDENTIAL INFORMATION

THIS DOCUMENT CONTAINS CONFIDENTIAL INFORMATION OF THE SPERRY RAND CORPORATION. IN CONSIDERATION OF THE RECEIPT OF THIS DOCUMENT, THE RECIPIENT AGREES NOT TO REPRODUCE, COPY, USE OR TRANSMIT THIS DOCUMENT AND/OR THE INFORMATION THEREIN CONTAINED, IN WHOLE OR IN PART, OR TO SUFFER SUCH ACTION BY OTHERS, FOR ANY PURPOSE, EXCEPT WITH THE WRITTEN PERMISSION, FIRST OBTAINED, OF SPERRY RAND CORPORATION, AND FURTHER AGREES TO SURRENDER SAME TO SPERRY RAND CORPORATION UPON DEMAND.

UNLESS OTHERWISE SPECIFIED
DIMENSIONS IN INCHES TOL. ON 2 PLACE DECIMALS ± ; 3 PLACE DECIMALS ± ; ANGLES ±
HOLE DIA. TOL. 0 THRU .250 ± .003 − .002; .251 THRU .500 ± .005 − .003; .501 AND LARGER ± .010 − .005
THREADS: EXT. CL 2A, INT CL 2B
COMMODITY CODE

| | | |
|---|---|---|
| LAYOUT | VIRGINIA TAWRESEY | DATE 3/13/67 |
| DRAFTSMAN | | 5/1/67 |
| CHECKER | M.S. | 5/11/67 |
| ENGINEER | | 5/16/67 |
| APPROVAL | | 5/16/67 |
| | | 11/27/67 |

DO NOT SCALE THIS PRINT

CLASS A

UNIVAC
DIVISION OF SPERRY RAND CORPORATION

TITLE: DATA REGISTER CONTROLS

SIZE D | CODE IDENT. NO. | DWG NO. 3842972

SCALE NONE | WEIGHT | SHEET 1 OF 1

A B

| REVISIONS | | | | | | |
|---|---|---|---|---|---|---|
| ZONE | LTR | EIR | DESCRIPTION – FOR DETAILS SEE EIR | CHK | DATE | APPROVED |
| | - | H18603-1P | RELEASE | mj | 5-11-67 | GJL |
| | A | H-18817-1 | ADDED ⏚ TO GND ON COMP 036 | mj | 7-28-67 | GJL |
| | B | H-18669-3 | ADDED INP. TO COMP 031 & 004 | [illegible] | [illegible] | [illegible] |
| | C | C10262-1 | SEE EIR | [illegible] | 4/9/69 | KWJ |
| | D | C 15884-1 F | SEE EIR | [illegible] | 4/5/74 | GJL |
| | E | 23470 | ADDED GATE 973104 | [illegible] | 2/24/77 | JBE |

H PUN CARDS OFF LINE (VOFLP) 972,969
H INST EXECUTION INITIATED (VINSTR) 968
H MAINT SW (SWAP BUFFER FUNC) (VSFFO) 969
H DATA REQ (VFDRQ) 968
H ACTUATE CLH SOLENOID (VCLC)
L CD FEED INITIATED (VFEED)
H CD FEED INITIATED (VFEED)
L FEED RUN, CD BEING PROCESSED (VFORUN) 977
H CLH SPT (VCLSPR) 976
L CLH SPT (VCLSPR)
(CYCLE START → ROW 12) (VONL) CD BEING PROCESSED 972,976,980,984,988,978
L CD BEING PROCESSED (ROW 9-13) (VRUN) 978,976
H CD BEING PROCESSED (ROW 9-13) (VRUN)
L CYCLE START JAM ROW CNTR → PRE 9 VALUE (VCYST)
H CYCLE START JAM ROW CNTR → PRE 9 VALUE (VCYST) 977,979
H CD BEING PROCESSED (CYCLE START → ROW 12) (VONL) 974
H MOTOR CONTACTOR IS CLOSED (VMOTOR) 975

A B48 973051 VD48
N B59 973052 VB48
FF B45/B45 973056 973057 VC07 VC07
FF B45/B45 973019 973020 VD21 VD21
FF B103 973024 973025 VC13 VC13
OR 860 973046 VD13
SS B103/B103 973027 973028 VC14 VC14
A B76 973031 VC12
SS B103 B103 973036 973037 VC13 VC13
ST
PPFSA B71 973007 VE08
MOTOR ON DELAY
MOTOR OFF DELAY
3 SEC
20 SEC
40 μF 35V
P CYCLE START
AR B76 973041 VC03
A B71 973040 VD05
OR B59 973042 VC15
A B59 973044 VC15
N B60 973045 VD13
N B59 973104 VE28
AR B76 973032 VC04
N B59 973002 VC16
N B59 973005 VC15
N B59 973008 VC15
FEED REQUEST
OR B24 973012 VD17
A B71 973006 VE07
ST
PPFSA B71 973003 VE07
N B59 973103 VB24
FF B103/B103 973013 973014 VC14 VC14
MOTOR FF
N B59 973050 VA34
A B52 973009 VD11
A B51 973010 VD12
A B51 973011 VC10
OR B71 973001 VE07
OR B48 973004 VC11
A B103 973013 VC14
A B103 973014 VC14
OR B52 973055 VD15
A B52 973054 VD15
OR B52 973058 VD15
OR B52 973018 VD18
A B51 973016 VE19
OR 952 973053 VD11
A B103 973024 VC13
A B103 973025 VC13
LD B103 973027 VC14
OR B76 973030 VC08
LD B103 973036 VC13
A B59 973034 VC15
OR 860 973046 VD13

L CYCLE START RET (VCSTHB) 975
L CYCLE START (VCSTHA) 975
L CLR: GENERATED MANUALLY + SELECTIVE RESET + CHAIN CLR (VCLR) 966

973101 973102
S3 S2 S1 TYPE C116 TMG 3613235 VD50

H PUN ERR OTHER THAN HOLE COUNT (VPABH2) 974
H PTP SELECTED (VPTSEL) 964
L INST EXECUTION INITIATED (VINSTR) 968
L A CDM REQUIRING A CD FEED HAS BEEN ACCEPTED (VFCAMD) 969
H OFF LINE FF (VOFLF) 974
L OFF LINE FF (VOFLE) 974
H INTLK OPEN (VINTLQ) 975
H FRAME SW OPEN (VFRSWQ) 975
H MAN FEED SW DEPRESSED (VSTOPBQ) 975
L READ INFO IS LOADED IN BIT SHIFTER (VSPR2) 976
L PUN ROW CNTR = ROW 12 (VRON12)
H CLR GENERATED MANUALLY SELECTIVE RESET CHAN CLR (VCLRA)
L CLH SPT RET (VCSPHB) 975
L CLH SPT (VCSPHA) 976
P CLUTCH SPROCKET
H CLR: GENERATED MANUALLY + SELECTIVE RESET + CHAN CLR (VCLR) 966
L PUN ROW CNTR = ROW 13 (VRON13)
L IDLE RELAPSE TIME FOR PUN MAGNETS (VCCM) 977
L PUN ROW CNTR = ROW 13 (VRON13) 976

COMPANY CONFIDENTIAL INFORMATION
THIS DOCUMENT CONTAINS CONFIDENTIAL INFORMATION OF THE SPERRY RAND CORPORATION. IN CONSIDERATION OF THE RECEIPT OF THIS DOCUMENT, THE RECIPIENT AGREES NOT TO REPRODUCE, COPY, USE OR TRANSMIT THIS DOCUMENT AND/OR THE INFORMATION THEREIN CONTAINED, IN WHOLE OR IN PART, OR TO SUFFER SUCH ACTION BY OTHERS, FOR ANY PURPOSE EXCEPT WITH THE WRITTEN PERMISSION, FIRST OBTAINED, OF SPERRY RAND CORPORATION, AND FURTHER AGREES TO SURRENDER SAME TO SPERRY RAND CORPORATION.

PART NO:
IDENT NO. 3842973-00
~~FOR MATL REQUIREMENTS SEE L/M, L/M REV LETTER CONTROLS DOCUMENT.~~

UNLESS OTHERWISE SPECIFIED
DIMENSIONS IN INCHES TOL. ON 2 PLACE DECIMALS ± 3 PLACE DECIMALS ± ANGLES ±
HOLE DIA. TOL. 0 THRU .250 + .003 − .002; .251 THRU .500 + .005 − .003; .501 AND LARGER − .010 − .005
THREADS: EXT. CL 2A, INT CL 2B
COMMODITY CODE

LAYOUT VIRGINIA TECHNOLOGY
DRAFTSMAN
CHECKER
ENGINEER
APPROVAL

DATE 9/1/67; 9/1/67; 5/14/67

CLASS A
UNIVAC DIVISION OF SPERRY RAND CORPORATION
TITLE
CLUTCH, MOTOR CONTROLS
SIZE D
CODE IDENT. NO.
WG NO. 3842973
SCALE NONE
WEIGHT
SHEET 1 OF 1
A B C D E

DO NOT SCALE THIS PRINT

DWG NO. 3842973

| REVISIONS | | | | | | |
|---|---|---|---|---|---|---|
| ZONE | LTR | EIR | DESCRIPTION — FOR DETAILS SEE EIR | CHK | DATE | APPROVED |
| | - | H18603-1P | RELEASE | MJ | 5-11-67 | GJL |
| | A | H18669-2 | ADDED COMP 072 | MJ | 5-30-67 | GJL |
| | B | C10125-1 | SEE EIR | | 7-14-69 | JRE |
| | C | C13043-1 | SEE EIR | | 4/13/71 | JRE |

L HOP EMT+STKR FULL+STKR JAM+CHIP BOX FULL (VHESF) 959

H HOP EMT+STKR FULL+STKR JAM+CHIP BOX FULL (VHESF)

L HOP EMT+STKR FULL+STKR JAM +CHIPS+INTLK (VPA8N) 13

H HOP EMT+STKR FULL+STKR JAM +CHIPS+INTLK (VPA8N) 966 03

L INTLK SENSE FF (VINTF) 959

H INTLK SENSE FF (VINTF)

H POWER ON CLR IS ACTIVE (VCLRSW) 989, 964, 965, 975

H PUN ERR OTHER THAN HOLE COUNT (VPA8N2) 968, 973, 978 11

VOFL 966

L PUN ERR OTHER THAN HOLE COUNT (VPA8N2) 956, 968 10

H RDY IND IS ON (VRDY) 975 18

TO READY INDICATOR

L OFF LINE FF (VOFLF) 966, 969, 963, 973, 994

H OFF LINE FF (VOFLF) 962, 963, 965, 966, 973

L OFF LINE (VOFLFB) 955 11

L CARD JAM AT STATION 2 PCL (VAJAM) 958

H CARD JAM AT STATION 2 PCL (VAJAM) 968

H A JAM IND IS ON (VAIND) 975 02

"A" JAM F/F

L CARD JAM AT STATION 4 PCL (VBJAM) 958

H CARD JAM AT STATION 4 PCL (VBJAM) 968

"B" JAM F/F

H B JAM IND IS ON (VBIND) 975 18

H ENERGIZE STKR SEL ACT (VSTSEL) 975 02

FF B45/B45 974015 VD06 / 974016 VD06 — HOPPER, CHIPS, STACKER SENSE F/F

FF B45/B45 974021 VD07 / 974022 VD07 — INTERLOCK SENSE F/F

FF B45/B45 974029 VD06 / 974030 VD06 — OFF LINE F/F

FF B45/B45 974043 VD06 / 974044 VD06

FF B45/B45 974055 VD07 / 974056 VD07

FF B45/B45 974065 VD07 / 974066 VD07 — SELECT STACKER F/F

A B24 974002 VC33 — H EMT HOP (VEHQ) 975

A B51 974013 VD08 — H STKR FULL+STKR JAM+CHIP BOX FULL (VSTOPQ) 975

A B24 974004 VC34 — H STAT IN (VSTINT) 965

A B51 974019 VD09 — H PTP SELECTED (VPTSEL) 964

A B60 974024 VD13 — H CLR: GENERATED MANUALLY+SELECTIVE RESET+CHAN CLR (VCLRA) 966

A B51 974026 VD09 — H INTLK OPEN (VINTCQ) 975

A B51 974025 VD09 — H FRAME SW OPEN (VFRSWQ) 975

A B51 974072 VD09 — H CARD BEING PROCESSED (CYCLE START→ROW 12) (VONLIQ) 973

A B52 974042 VD10 — H PARITY CORRECT DVCE NUMBER ON BUS OUT (VACOMP) 975

A B51 974041 VD08 — H CLR SW DEPRESSED (VCLRQ) 975

A B52 974071 VD15 — H OFF LINE SW NO CONTACT IS CLOSED (VCSSQ) 975

A B51 974040 VD08 — H ASSYNCHRONOUS START SYNC FF (VSTARTS) 966

A B52 974052 VD10 — L OPL IN FF (VOPIN) 963

A B51 974048 VC10 — H INST IS BEING EXECUTED (VACTIVE) 968

A B52 974049 VD10 — H SEL OUT (VSELO) 963

A B51 974050 VC10 — H DVCE END (VDVEND) 968

A B52 974051 VD10 — H STAT REQ FF (VSTR) 967

PCA B92 974011 VE06 — L CLR: GENERATED MANUALLY+SELECTIVE RESET+CHAN CLR (VCLR) 966

A B51 974062 VD12 — L PUN ROW CNTR=ROW (7+1) (VROW71) 977

A B51 974060 VD12 — L SR→BUFF AND PRE READ HOLE COUNT (VCCI) 976

A B52 974061 VD10 — STATION 2 PCL A RET (VPCA1B) 975

N B59 974005 VF08 — STATION 2 PCL A OUPT (VPCA1A) 975

.1uf

OR B71 974031 VD05 — L HOP EMT+STKR FULL+STKR JAM +CHIPS+INTLK (VPA8N)

A B76 974032 VC08 — H HOP EMT+STKR FULL+STKR JAM +CHIPS+INTLK (VPA8N)

A B59 974033 VC15 — H PUN ERR OTHER THAN HOLE COUNT (VPA8N2)

OR B8 974034 VC11 — L PUN ERR OTHER THAN HOLE COUNT (VPA8N2)

AR B76 974036 VC08 — H RDY IND IS ON (VRDY)

N B59 974069 VF10 — L OFF LINE (VOFLFB)

AR B76 974046 VC08 — H A JAM IND IS ON (VAIND)

AR B76 974057 VC03 — H B JAM IND IS ON (VBIND)

AR B76 974067 VC04 — H ENERGIZE STKR SEL ACT (VSTSEL)

OR B76 974001 VC03 — H STKR FULL+STKR JAM+CHIP BOX FULL (VSTOPQ)

OR B52 974018 VC36 — H CLR: GENERATED MANUALLY+SELECTIVE RESET+CHAN CLR (VCLRA)

OR B76 974003 VC04 — H FRAME SW OPEN (VFRSWQ)

OR B52 974070 VD10 — H CARD BEING PROCESSED (CYCLE START→ROW 12) (VONLIQ)

N B76 974006 VC05 — H PARITY CORRECT DVCE NUMBER ON BUS OUT (VACOMP)

N B76 974007 VC06 — H CLR SW DEPRESSED (VCLRQ)

N B76 974008 VC06 — H OFF LINE SW NO CONTACT IS CLOSED (VCSSQ)

N B76 974010 VC05 — L PUN ROW CNTR=ROW (7+1) (VROW71)

PCA B92 974009 VE06 — L SR→BUFF AND PRE READ HOLE COUNT (VCCI)

N B76 974012 VC12 — H ASSYNCHRONOUS START SYNC FF (VSTARTS)

STATION 2 PCL A RET (VPCA1B) 975

STATION 2 PCL A OUPT (VPCA1A) 975

H ROW (13-15)+PRE-9 VALUE (VR13FF) 977

L UPPER FIELD FF (ROW 3-15) (VRUF) 977

L PUN ROW CNTR=ROW (5+11) (VROW511) 977

H UPPER FIELD FF (ROW 3-15) (VRUF) 977

H PUN SPT (STEP CYCLE CTR) (VSPR) 976

L SR→POST READ HOLE COUNTER PUN INFO→SR AND HOLE COUNTER (VCC2) 976

L PUN ROW CNTR=ROW (6+0) (VROW60) 977

STATION 4 PCL B RET (VPCB1B) 975

STATION 2 PCL A OUPT (VPCB1A) 975

L IDLE RELAPSE TIME FOR PUN MAGNETS (VCC4) 976

L PUN ROW CNTR=ROW 13 (VROW13) 977

L PUN ROW CNTR=ROW 12 (VROW12) 977

L A SEL STKR COM HAS BEEN ACCEPTED (VSELS) 969

L HOLE COUNT ERR: POST RD HOLE CNTR≠0 WHEN CARD PROCESSING COMPLETED (VHCE) 978

L CLOCK OUPT TP5 (VTP5) 989

COMPANY CONFIDENTIAL INFORMATION

THIS DOCUMENT CONTAINS CONFIDENTIAL INFORMATION OF THE SPERRY RAND CORPORATION. IN CONSIDERATION OF THE RECEIPT OF THIS DOCUMENT, THE RECIPIENT AGREES NOT TO REPRODUCE, COPY, USE OR TRANSMIT THIS DOCUMENT AND/OR THE INFORMATION THEREIN CONTAINED, IN WHOLE OR IN PART, OR TO SUFFER SUCH ACTION BY OTHERS, FOR ANY PURPOSE, EXCEPT WITH THE WRITTEN PERMISSION, FIRST OBTAINED, OF SPERRY RAND CORPORATION, AND FURTHER AGREES TO SURRENDER SAME TO SPERRY RAND CORPORATION UPON DEMAND.

UNLESS OTHERWISE SPECIFIED
DIMENSIONS IN INCHES TOL. ON 2 PLACE DECIMALS ± / 3 PLACE DECIMALS ± / ANGLES ± /
HOLE DIA. TOL. 0 THRU .250 +.003 −.002; .251 THRU .500 +.005 −.003; .501 AND LARGER +.010 −.005
THREADS: EXT. CL 2A, INT CL 2B
COMMODITY CODE

LAYOUT B. LINS 3/15/67
DRAFTSMAN 5/18/67
CHECKER MJ 5-11-67
ENGINEER 5/16/67
APPROVAL 5/24/67

DO NOT SCALE THIS PRINT

PART NO.
IDENT NO. 3842974-00

FOR MATL REQUIREMENTS SEE L/M, L/M REV LETTER CONTROLS DOCUMENT.

CLASS A

UNIVAC
DIVISION OF SPERRY RAND CORPORATION

TITLE
JAM DETECTION, STACKER SELECT, OFF LINE

SIZE D | CODE IDENT. NO. | DWG NO. 3842974

SCALE NONE | WEIGHT | SHEET 1 OF 1

A B C

DWG NO. 3842974

UDI-457 99/45-152 - 66

| TT | MRCC | FUNCTION | |
|---|---|---|---|
| | VB19 | USED WITH PUNCH PAPER TAPE ONLY 001-018 | |

| CONTACT NO. | SIGNAL INPUT | TITLE OUTPUT | SIGNAL DESCRIPTION | SOURCE OR OUTPUT LIST | |
|---|---|---|---|---|---|
| 01 | | | | | |
| 02 | | | | | |
| 03 | VPB2 | | H INPUT → CHAN 2 ACTR | 995 | |
| 04 | VPB3 | | H INPUT → CHAN 3 ACTR | 995 | |
| 05 | VPB4 | | H INPUT → CHAN 4 ACT? | 995 | |
| 06 | VPB5 | | H INPUT → CHAN 5 ACTR | 995 | |
| 07 | VPB6 | | H INPUT → CHAN 6 ACTR | 995 | |
| 08 | VPB7 | | H INPUT → CHAN 7 ACTR | 995 | |
| 09 | VPB8 | | H INPUT → CHAN 8 ACTR | 995 | |
| 10 | VPB1 | | H INPUT → CHAN 1 ACTR | 995 | |
| 11 | VPFED | | H FEED TAPE | 994 | |
| 12 | | | | | |
| 13 | | | | | |
| 14 | | | | | |
| 15 | | VPTLOW | L TAPE LOW ON PTP PUN | 994 | |
| 16 | | VGND | | 975 | GROUND (PIN 19) |
| 17 | VGND | | | 975 | GROUND (PIN 19) |
| 18 | | VPSPR | H PTP PUN SPT | 994 | |

| TT | MRCC | FUNCTION | |
|---|---|---|---|
| | VC02 | 101-118 | |

| CONTACT NO. | SIGNAL INPUT | TITLE OUTPUT | SIGNAL DESCRIPTION | SOURCE OR OUTPUT LIST | |
|---|---|---|---|---|---|
| 01 | | VINTLQ | H INTLK OPEN | 973,974 | |
| 02 | | VTMST | H PTP PUN MOTOR SW ON | 994 | |
| 03 | VTMRL | | H PTP PUN MOTOR RELAY ON | 994 | |
| 04 | | | | | |
| 05 | | | | | |
| 06 | | | | | |
| 07 | | | | | |
| 08 | | | | | |
| 09 | | | | | |
| 10 | | | | | |
| 11 | | | | | |
| 12 | | | | | |
| 13 | | | | | |
| 14 | | | | | |
| 15 | | | | | |
| 16 | | | | | |
| 17 | VCEIND | | H HOLE COUNT CK, IND ON | 978 | |
| 18 | VSTSEL | | H ENERGIZE STKR SEL ACTR | 974 | 7TB2-1* |

NOTE:
*INDICATES BACKBOARD CONNECTION

| TT | MRCC | FUNCTION | |
|---|---|---|---|
| CON | VE05 | 201-218 | |

| CONTACT NO. | SIGNAL INPUT | TITLE OUTPUT | SIGNAL DESCRIPTION | SOURCE OR OUTPUT LIST | |
|---|---|---|---|---|---|
| 01 | | VPCA1A | STATION 2 PCL A OUPT | 974 | 5TB14-3 |
| 02 | | VPCA1B | STATION 2 PCL A RET | 974 | 5TB14-4 |
| 03 | | | | | |
| 04 | | | | | |
| 05 | | VPCB1A | STATION 4 PCL B OUPT | 974 | 5TB14-7 |
| 06 | | VPCB1B | STATION 4 PCL B RET | 974 | 5TB14-8 |
| 07 | | | | | |
| 08 | | | | | |
| 09 | | VCSPHA | CLH SPT | 973-1 | 5TB13-1 |
| 10 | | VCSPHB | CLH SPT RET | 973-1 | 5TB13-2 |
| 11 | | VCSTHA | CYCLE START | 973-1 | 5TB14-1 |
| 12 | | VCSTHB | CYCLE START RET | 973-1 | 5TB14-2 |
| 13 | | VSPHA | CYCLE CTR SPT | 976-1 | 5TB13-5 |
| 14 | | VSPHB | CYCLE CTR SPT RET | 976-1 | 5TB13-6 |
| 15 | | | | | |
| 16 | | | | | |
| 17 | | | | | |
| 18 | | | | | |

| TT | MRCC | FUNCTION | |
|---|---|---|---|
| CON | VC01 | 301-318 | |

| CONTACT NO. | SIGNAL INPUT | TITLE OUTPUT | SIGNAL DESCRIPTION | SOURCE OR OUTPUT LIST | |
|---|---|---|---|---|---|
| 01 | | | | | |
| 02 | | VCLRQ | H CLR SW DEPRESSED | 974-1 | |
| 03 | | | | | |
| 04 | | VSTOPBQ | H MAN FEED SW DEPRESSED | 973-1 | |
| 05 | | VEHQ | H EMT HOP | 974-1 | |
| 06 | | VSTOPQ | H STKR FULL+STKR JAM+CHIP BOX FULL | 974-1 | |
| 07 | | VCSSQ | H OFF LINE SW NO CONTACT IS CLOSED | 974 | |
| 08 | | VFRSWQ | H FRAME SW OPEN | 973, 974 | |
| 09 | VCLRSW | | H POWER ON CLR IS ACTIVE | | |
| 10 | VRTPR | | H BRUSH PROBE/PRE READ STATION | 976 | 5P2-E* |
| 11 | VR2PR | | H BRUSH PROBE/POST READ STATION | 976 | 5P1-E* |
| 12 | VRDY | | H RDY IND IS ON | 974 | |
| 13 | VBIND | | H B JAM IND IS ON | 974 | |
| 14 | VAIND | | H A JAM IND IS ON | 974 | |
| 15 | | | | | |
| 16 | | | | | |
| 17 | | | | | |
| 18 | VMOTOR | | H MOTOR RELAY CONTACTOR IS CLOSED | 973 | |

| REVISIONS | | | | | | |
|---|---|---|---|---|---|---|
| SYM | ZONE | ZIR | DESCRIPTION | CHK | DATE | APPROVED |
| - | | H18603-1P | RELEASE | MJS | 5-11-67 | GJ2 |
| A | | C10262-1 | SEE EIR | MJS | 5-11-67 | GJW |

| QTY REQD | FIND | REF DES | CODE IDENT | DWG SIZE | PART OR IDENTIFYING NO. | NOMENCLATURE OR DESCRIPTION |
|---|---|---|---|---|---|---|

LIST OF MATERIAL

~~PART NO.~~
IDENT. NO. 3842975-00

THIS DOCUMENT CONTAINS CONFIDENTIAL INFORMATION OF THE UNIVAC DIVISION OF SPERRY RAND CORPORATION AND IS FURNISHED PURSUANT TO THE FOLLOWING INSTRUMENT:

ON THE UNDERSTANDING THAT THIS DOCUMENT AND THE INFORMATION THEREON MAY NOT BE DEALT WITH IN ANY MANNER EXCEPT FOR THE PURPOSES OF THAT INSTRUMENT OR AS OTHERWISE PERMITTED IN WRITING BY THE UNIVAC DIVISION OF SPERRY RAND CORPORATION.

NEXT ASSY | EQUIPMENT
APPLICATION
COMMODITY CODE

UNLESS OTHERWISE SPECIFIED
DIMENSIONS IN INCHES. TOLERANCE ON
2 PLACE DECIMALS ± | 3 PLACE DECIMALS ± | ANGLES ±
HOLE DIAMETER TOLERANCE
0 THRU .250 +.003 −.002 | .251 THRU .500 +.005 −.003 | .501 & LARGER +.010 −.005
THREADS: EXT CL 2A, INT CL 2B
MATERIAL
FINISH

| | | DATE |
|---|---|---|
| LAYOUT | M. WEINBERG | 3-14-67 |
| DRAFTSMAN | M J Beasley | 3-14-67 |
| CHECKER | M J Beasley MJ | 5-11-67 |
| ENGINEER | G. Hamm | 5-11-67 |
| APPROVAL | G J Beasley | 5/11/67 |

CLASS A

UNIVAC
DIVISION OF SPERRY RAND CORPORATION

TITLE
PUNCH INTERNAL CONNECTORS

CODE IDENT NO. | SIZE D | DWG NO. 3842975

SCALE NONE | WEIGHT | SHEET 1 OF 1

DO NOT SCALE THIS PRINT

DWG NO. 3842975

UDF1210

| REVISIONS | | | | | | |
|---|---|---|---|---|---|---|
| ZONE | LTR | EIR | DESCRIPTION – FOR DETAILS SEE EIR | CHK | DATE | APPROVED |
| | - | H18603-1P | RELEASE | MS | 5-11-67 | |
| | A | H13817-1 | ADDED CCC FF AT COMP 009 | MS | 7 28 67 | |
| | B | 11418-2 | SEE EIR | | | |
| | C | C11673-1 | SEE EIR | | | |
| | D | 14477-1 | SEE EIR | MS | 7-21-67 | |

H SYNCHRONIZED SPT ($\overline{VSPRB}$) 978

L SYNCHRONIZED SPT (VSPRB) 978

H RD INFO IS LOADED IN BIT SHIFTER ($\overline{VSPR2}$)

L RD INFO IS LOADED IN BIT SHIFTER (VSPR2) 973,978,980

H SYNCHRONIZED SPT ($\overline{VSPRA}$) 979

L SYNCHRONIZED SPT (VSPRA) 978,984

H PUN SPT (STEP CYCLE CTR) ($\overline{VSPR}$) 974

L PUN SPT (STEP CYCLE CTR) (VSPR) 978

H BRUSH PROBE: POST RD STATION ($\overline{VR2PR}$) 975

H BRUSH PROBE: PRE RD STATION ($\overline{VR1PR}$) 975

L SR → BUFF & PRE READ HOLE COUNT (VCC1) 972,978,974,984

L SR → POST RD HOLE CTR. PUN INFO → SR. HOLE COUNTER (VCC2) 978,974

H SR → POST RD HOLE CTR. PUN INFO → SR HOLE CTR ($\overline{VCC2}$) 980

L SR → PUN MAGNETS (VCC3) 978, (3839090 ●)

L IDLE RELAPSE TIME FOR PUN MAGNETS (VCC4) 973,974,978

L 0 → SR (VCC5) 977,978,980

H 0 → SR ($\overline{VCC5}$)

H CYCLE CTR FF "B" ($\overline{VCC6}$) 972,980,984

H SR → PUN MAGNETS ($\overline{VPDA}$) 992

H SR → PUN MAGNETS ($\overline{VPDB}$) 99: 992

H SR → PUN MAGNETS ($\overline{VPDC}$) 991

H SR → PUN MAGNETS ($\overline{VPDD}$) 990

POST P READ PROBE

PRE READ PROBE

VC0607 976024

VC0613 976025

-30V

PRE SET MAR & START SHIFT

N B59 976017 VB39

AR B76 976020 VC06

AR B76 976023 VC06

A B48 976016 VA38

A B48 976018 VA38

A B48 976019 VA38

N B59 976034 VA37

N B59 976036 VA37

N B59 976038 VA37

N B59 976040 VA37

N B59 976042 VB39

A B59 976033 VA37

A B59 976035 VA37

A B59 976037 VA37

A B48 976039 VA38

A B71 976041 VE08

OR B71 976043 VE08

AR B76 976050 VC05

AR B76 976052 VC05

AR B76 976054 VC12

AR B76 976056 VC12

VC0507 976051

VC0513 976053

VC1213 976055

VC1207 976057

CCA FF

FF B47/B47 976006 VA41 976005 VA41

CCB FF

FF B47/B47 976008 VA41 976007 VA41

CCC FF

FF B47/B47 976010 VA40 976009 VA40

FF B47/B47 976012 VA40 976013 VA40

FF B47/B47 976015 VA39 976014 VA39

N B59 976002 VC16

TD B90 976061 VB37 OR 100us

ST PPFSA B71 976001 VD05

N B59 976003 VC42

N B59 976004 VD37

N B60 976032 VD13

A B51 976030 VD12

A B52 976031 VB11

H CLOCK OUPT TP6 ($\overline{VTP6}$) 989

H CLOCK OUPT TP7 ($\overline{VTP7}$) 989

CYCLE CTR SPT REL (VSPHB) 975

CYCLE CTR SPT (VSPHA) 975

L CARD BEING PROCESSED (ROW 0-13) (VRUN) 973

H CLR SPT ($\overline{VCLSPR}$) 973

L PUN CON ACCEPTED (VPUNCH) 969

H ROW 13 FF (PRE 0 VALUE) ($\overline{VR13FF}$) 977

H CARD BEING PROCESSED (CYCLE START → ROW 12) (VONL) 973

NOTES:
1. ALL RESISTORS ARE 1K, 2W
2. ● INDICATES CARD EDGE FEATURE F1174-00.

| STEP | TIME (MS) | CLUTCH SPR | SPR | CCA | CCB | CCC | OPERATION |
|---|---|---|---|---|---|---|---|
| CC1 | 3.25 | | | 0 | 0 | 1 | PROBE PRE-PUNCH READ → SHIFT REG |
| CC2 | 3.25 | | | 1 | 0 | 0 | SHIFT: SHIFT REG → MEM & HCR1 0 → SHIFT REG<br>PROBE POST P READ → SHIFT REG<br>SHIFT SR → HCR2<br>MEMORY → SR |
| CC3 | 8.0 | | | 1 | 1 | 0 | SHIFT REG. → PUNCH MAGNETS |
| CC4 | 3 | | | 1 | 1 | 1 | IDLE |
| CC5 | 2.5 | | | 0 | 1 | 1 | SHIFT: 0 → SR |

DWG NO. 3842976

~~PART NO.~~

IDENT NO. 3842976-00

~~FOR MATL REQUIREMENTS SEE L/M, L/M REV LETTER CONTROLS DOCUMENT.~~

COMPANY CONFIDENTIAL INFORMATION
THIS DOCUMENT CONTAINS CONFIDENTIAL INFORMATION OF THE SPERRY RAND CORPORATION. IN CONSIDERATION OF THE RECEIPT OF THIS DOCUMENT, THE RECIPIENT AGREES NOT TO REPRODUCE, COPY, USE OR TRANSMIT THIS DOCUMENT AND/OR THE INFORMATION THEREIN CONTAINED, IN WHOLE OR IN PART, OR TO SUFFER SUCH ACTION BY OTHERS, FOR ANY PURPOSE, EXCEPT WITH THE WRITTEN PERMISSION, FIRST OBTAINED, OF SPERRY RAND CORPORATION, AND FURTHER AGREES TO SURRENDER SAME TO SPERRY RAND CORPORATION.

UNLESS OTHERWISE SPECIFIED
DIMENSIONS IN INCHES TOL. ON 2 PLACE DECIMALS ± – ; 3 PLACE DECIMALS ± – ; ANGLES ± –
HOLE DIA. TOL 0 THRU .250 ± .003 – .002; .251 THRU .500 + .005 – .003; .501 AND LARGER – .010 – .005
THREADS: EXT. CL 2A, INT CL 2B
COMMODITY CODE

LAYOUT VIRGINIA TRAVESEY 5/8/67
DRAFTSMAN 3/22/67
CHECKER MS 5/11/67
ENGINEER T. L. Hanlon 5/11/67
APPROVAL 5/11/67

DO NOT SCALE THIS PRINT

CLASS A

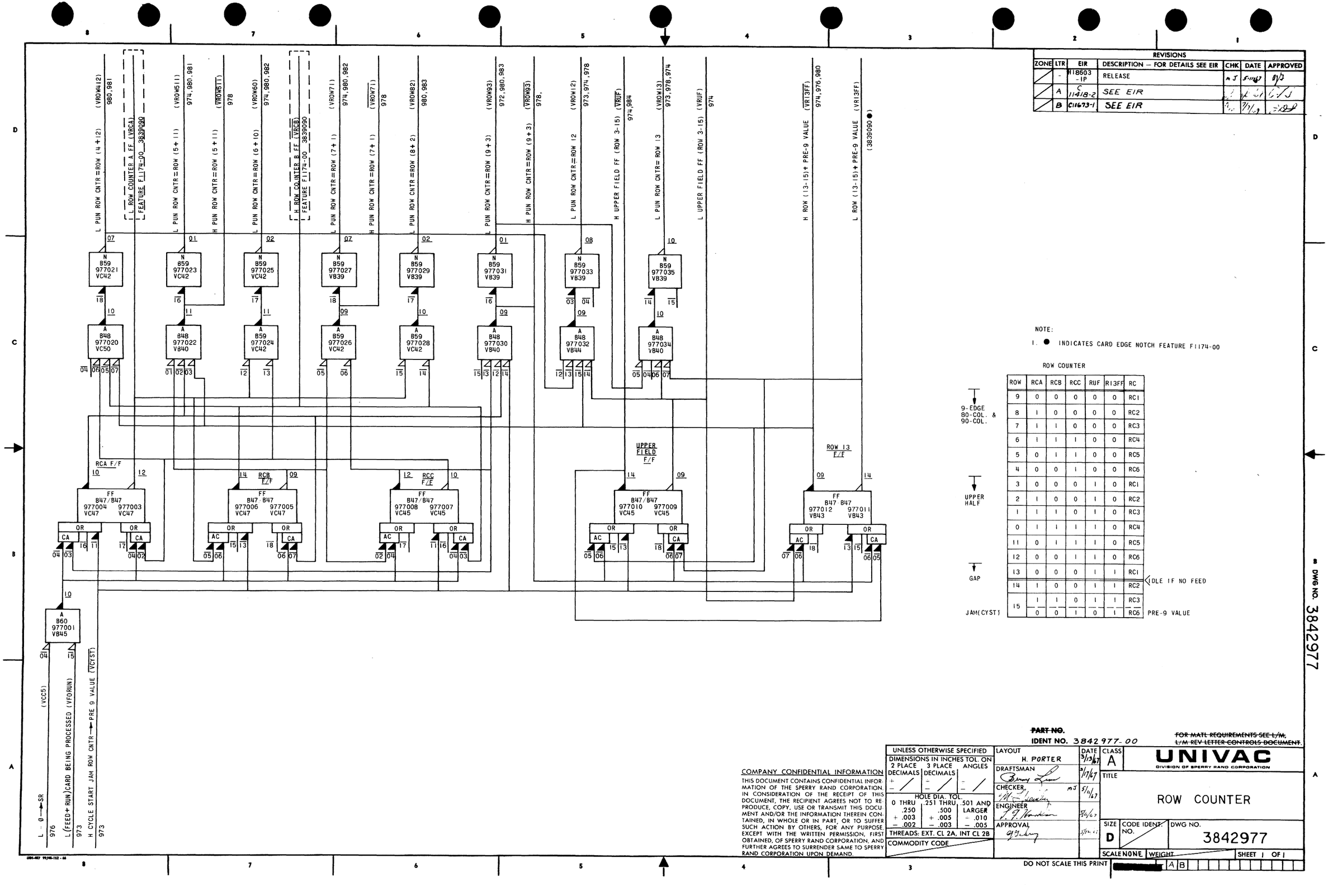
UNIVAC
DIVISION OF SPERRY RAND CORPORATION

TITLE
CYCLE COUNTER PUNCH DRIVERS READ PROBES

SIZE D | CODE IDENT. NO. | DWG NO. 3842976

SCALE NONE | WEIGHT | SHEET 1 OF 1

A B C D




| REVISIONS | | | | | | |
|---|---|---|---|---|---|---|
| ZONE | LTR | EIR | DESCRIPTION — FOR DETAILS SEE EIR | CHK | DATE | APPROVED |
| | - | A18603 - 1P | RELEASE | MJ | 5-11-67 | [illegible] |
| | A | C 11418-2 | SEE EIR | [illegible] | [illegible] | [illegible] |
| | B | C11673-1 | SEE EIR | [illegible] | 7/1/67 | [illegible] |

NOTE:

1. ● INDICATES CARD EDGE NOTCH FEATURE FI174-00

ROW COUNTER

| | ROW | RCA | RCB | RCC | RUF | R13FF | RC |
|---|---|---|---|---|---|---|---|
| 9-EDGE 80-COL. & 90-COL. | 9 | 0 | 0 | 0 | 0 | 0 | RC1 |
| | 8 | 1 | 0 | 0 | 0 | 0 | RC2 |
| | 7 | 1 | 1 | 0 | 0 | 0 | RC3 |
| | 6 | 1 | 1 | 1 | 0 | 0 | RC4 |
| | 5 | 0 | 1 | 1 | 0 | 0 | RC5 |
| | 4 | 0 | 0 | 1 | 0 | 0 | RC6 |
| UPPER HALF | 3 | 0 | 0 | 0 | 1 | 0 | RC1 |
| | 2 | 1 | 0 | 0 | 1 | 0 | RC2 |
| | 1 | 1 | 1 | 0 | 1 | 0 | RC3 |
| | 0 | 1 | 1 | 1 | 1 | 0 | RC4 |
| | 11 | 0 | 1 | 1 | 1 | 0 | RC5 |
| | 12 | 0 | 0 | 1 | 1 | 0 | RC6 |
| GAP | 13 | 0 | 0 | 0 | 1 | 1 | RC1 |
| | 14 | 1 | 0 | 0 | 1 | 1 | RC2 |
| | 15 | 1 | 1 | 0 | 1 | 1 | RC3 |
| JAM(CYST) | | 0 | 0 | 1 | 0 | 1 | RC6 |

IDLE IF NO FEED

PRE-9 VALUE

DWG NO. 3842977

COMPANY CONFIDENTIAL INFORMATION
THIS DOCUMENT CONTAINS CONFIDENTIAL INFORMATION OF THE SPERRY RAND CORPORATION. IN CONSIDERATION OF THE RECEIPT OF THIS DOCUMENT, THE RECIPIENT AGREES NOT TO REPRODUCE, COPY, USE OR TRANSMIT THIS DOCUMENT AND/OR THE INFORMATION THEREIN CONTAINED, IN WHOLE OR IN PART, OR TO SUFFER SUCH ACTION BY OTHERS, FOR ANY PURPOSE, EXCEPT WITH THE WRITTEN PERMISSION, FIRST OBTAINED, OF SPERRY RAND CORPORATION, AND FURTHER AGREES TO SURRENDER SAME TO SPERRY RAND CORPORATION UPON DEMAND.

~~PART NO.~~
IDENT NO. 3842977-00

~~FOR MATL REQUIREMENTS SEE L/M, L/M REV LETTER CONTROLS DOCUMENT~~

| UNLESS OTHERWISE SPECIFIED | | | LAYOUT | DATE |
|---|---|---|---|---|
| DIMENSIONS IN INCHES TOL. ON 2 PLACE DECIMALS ± / | 3 PLACE DECIMALS ± / | ANGLES ± / | H. PORTER | 3/13/67 |
| HOLE DIA. TOL. 0 THRU .250 +.003 −.002 | .251 THRU .500 +.005 −.003 | .501 AND LARGER ±.010 −.005 | DRAFTSMAN | 5/1/67 |
| THREADS: EXT. CL 2A, INT CL 2B | | | CHECKER MJ | 5/1/67 |
| COMMODITY CODE | | | ENGINEER | 5/1/67 |
| | | | APPROVAL | 5/[illegible]/67 |

DO NOT SCALE THIS PRINT

CLASS A

UNIVAC
DIVISION OF SPERRY RAND CORPORATION

TITLE
ROW COUNTER

SIZE D | CODE IDENT. NO. | DWG NO. 3842977

SCALE NONE | WEIGHT | SHEET 1 OF 1

[redacted] A B

1801-427 99/65-132-66

| REVISIONS | | | | | | |
|---|---|---|---|---|---|---|
| ZONE | LTR | EIR | DESCRIPTION — FOR DETAILS SEE EIR | CHK | DATE | APPROVED |
| | - | H18603-1P | RELEASE | MS | 5-11-67 | |
| | A | H18669-1 | DELETED INPUT ON COMP. 020 | MJ | 6-19-67 | |
| | B | H18817-1 | REVISED OUTPUT ON COMP. 030 | MJ | 7-28-67 | |
| | C | C11673-1 | SEE EIR | | 7/1/69 | |

CHECKERBOARD FF

FF B47/B47 978007 978006 VB43 VB43

OR B54 978005 VB46

A B59 978004 VA44

A B51 978002 VA43

OR B48 978001 VA42

H PUN ROW CTR=(ROW 7+1) (VROW71) 977

H PUN ROW CTR=(ROW 5+1) (VROW51) 977

H PUN ROW CTR=(ROW 9+3) (VROW93) 977

L PUN SPT (STEP CYCLE CNTR) (VSPR) 976

L SR → POST READ HOLE CNTR; PUN INFO → HOLE CNTR (VMCC2) 972

L CLOCK OUPT TP 1 (VTP1) 989

L BUFF CYCLE CONTROL (VMCB) 980

H PLUS ONE → PUN HOLE CTR (VPPT) 979

OR WIRE

HCP+1 → HCP

N B60 978014 VD41

A B60 978012 VB45

A B51 978013 VD39

N B59 978009 VD44

A B48 978003 VA42

A B48 978008 VB41

L SR → POST RD HOLE COUNTER . PUN INFO → SR . HOLE CNTR (VCC2) 976

L PUN INFO → SR . HOLE CNTR (VPINFA) 980

L CLOCK OUPT TP 3 (VTP3) 989

H MINUS ONE → POST READ CTR (VR2MT) 979

OR WIRE

HCR2-1 → HCR2

N B60 978017 VB45

A B60 978015 VB45

A B51 978016 VA43

H PLUS ONE → PRE RD HOLE CTR (VRIPT) 979

OR WIRE

HCR1+1 → HCR1

A B60 978018 VB45

A B60 978019 VD41

L PUN INFO → HOLE CNTR (VPINFB) 980

L CLOCK OUPT TP 7 (VTP7) 989

L RD INFO → (PRE RD + POST RD) HOLE CNTR (VRINFA) 980

HCW → HCP

L TRANS WAIT HOLE COUNT → PUNCH HOLE COUNT (VWTP) 979

N B60 978025 VB45

A B48 978024 VB41

L CARD BEING PROCESSED (CYCLE START → ROW 12) (VONL) 973

L SR → BUFF. PRE RD HOLE COUNT (VCC1) 976

L Ø → SR (VCC5) 976

L CARD BEING PROCESSED (ROW 9-13) (VRUN) 973

L PUN ROW CNTR = ROW 13 (VROW13) 977

H SYNCHRONIZED SPT (VSPRA) 976

L SYNCHRONIZED SPT (VSPRB) 976

HCR1 → HCW

H PRE RD HOLE CTR → WAIT HOLE CTR (VRITP) 979

A B60 978026 VD41

Ø → HCP

H Ø → PUN HOLE CTR (VQLP) 979

A B48 978027 VB41

HCP → HCR2

L PUN HOLE COUNT → POST READ HOLE COUNT (VPTR2) 979

N B59 978029 VA44

A B48 978028 VB41

L READ INFO IS LOADED IN BIT SHIFTER (VSPR2) 976

L IDLE (RELAPSE TIME FOR PUN MAGNETS) (VCC4) 976

L PUN ROW CNTR = ROW 12 (VROW12) 977

H PUN END (Ø → POST RD HOLE CTR; 1 → DVCD END) (VPEF) 968, 979

A B48 978030 VB44

Ø → HCR2

L HOLE COUNT ERR; POST RD HOLE CNTR ≠ Ø WHEN CARD PROCESSING COMPLETED (VHCE) 974

N B59 978034 VA44

N B59 978033 VA44

A B51 978031 VA43

L CLOCK OUPT TP 5 (VTP5) 989

L SR → PUN MAGNETS (VCC3) 976

H SYNCHRONIZED SPT (VSPRB) 976

L SYNCHRONIZED SPT (VSPRA) 976

L HOLE COUNT ERR (VUNEX) 959

H HOLE COUNT ERR (VUNEX) 968, 994

H HOLE COUNT CK IND ON (VCEIND) 975

AR B76 978100 VC17

UNIT EXCEPTION F/F

HOLE COUNT ERROR OR PAPER LOW F/F

FF B45/B45 978039 978040 VB42 VB42

A B52 978037 VB47

A B52 978032 VB47

A B48 978036 VB44

OR B52 978038 VB47

H POST RD HOLE CTR "B" (VHCR2B) 979

H POST RD HOLE CTR "A" (VHCR2A) 979

H POST RD HOLE CTR "C" (VHCR2C) 979

H CLR; GENERATED MANUALLY + SELECTIVE RESET + CHAN CLR (VCLR) 966

H STAT ADV AT COMPLETION OF COM (VSAK2) 968

PART NO:

IDENT NO. 3842978-00

FOR MATL REQUIREMENTS SEE L/M, L/M REV LETTER CONTROLS DOCUMENT.

COMPANY CONFIDENTIAL INFORMATION

THIS DOCUMENT CONTAINS CONFIDENTIAL INFORMATION OF THE SPERRY RAND CORPORATION. IN CONSIDERATION OF THE RECEIPT OF THIS DOCUMENT, THE RECIPIENT AGREES NOT TO REPRODUCE, COPY, USE OR TRANSMIT THIS DOCUMENT AND/OR THE INFORMATION THEREIN CONTAINED, IN WHOLE OR IN PART, OR TO SUFFER SUCH ACTION BY OTHERS, FOR ANY PURPOSE, EXCEPT WITH THE WRITTEN PERMISSION, FIRST OBTAINED, OF SPERRY RAND CORPORATION, AND FURTHER AGREES TO SURRENDER SAME TO SPERRY RAND CORPORATION UPON DEMAND.

UNLESS OTHERWISE SPECIFIED

DIMENSIONS IN INCHES TOL. ON 2 PLACE DECIMALS ± / 3 PLACE DECIMALS ± / ANGLES ± /

HOLE DIA. TOL. 0 THRU .250 +.003 −.002 / .251 THRU .500 +.005 −.003 / .501 AND LARGER +.010 −.005

THREADS: EXT. CL 2A, INT CL 2B

COMMODITY CODE

| | | DATE |
|---|---|---|
| LAYOUT | B LINS | 3/16/67 |
| DRAFTSMAN | Barry Lins | 3/16/67 |
| CHECKER | M J Harding MJ | 5/1/67 |
| ENGINEER | A J Harrison | 5/1/67 |
| APPROVAL | A J Felony | 5/10/67 |

DO NOT SCALE THIS PRINT

CLASS A

UNIVAC DIVISION OF SPERRY RAND CORPORATION

TITLE: HOLE COUNT CONTROLS

SIZE D | CODE IDENT. NO. | DWG NO. 3842978

SCALE NONE | WEIGHT | SHEET 1 OF 1

ABC

DWG NO. 3842978

| REVISIONS | | | | | | |
|---|---|---|---|---|---|---|
| ZONE | LTR | EIR | DESCRIPTION — FOR DETAILS SEE EIR | CHK | DATE | APPROVED |
| | - | H18603-1P | RELEASE | MJS | 5-11-67 | [illegible] |
| | A | H-18817-1 | 979028 WAS 927028 ON COMP028 | [illegible] | 7-28-67 | [illegible] |
| | B | C11679-1 | SEE EIR | [illegible] | 9/1/67 | [illegible] |

WAIT REGISTER

PUNCH HOLE COUNTER

PRE-READ HOLE COUNTER

WAITING (PRE-READ) HOLE COUNT

PUNCH HOLE COUNTER

POST READ HOLE COUNTER

PRE-READ HOLE COUNTER

L PUN HOLE CNTR A (VHCRPA) 958
L PUN HOLE CNTR B (VHCRPB) 958
L PUN HOLE CNTR C (VHCRPC) 959
H POST READ HOLE CNTR A (VHCR2A) 978
L POST READ HOLE CNTR A (VHCR2A) 959
H POST READ HOLE CNTR B (VHCR2B) 978
L POST READ HOLE CNTR B (VHCR2B) 959
H POST READ HOLE CNTR C (VHCR2C) 978
L POST READ HOLE CNTR C (VHCR2C) 959

H CYCLE START JAM RDY CNTR → PRE 9 VALUE (VCSTY) 973
H PLUS ONE → PRE RD HOLE CTR (VRIPI) 978
H PRE RD HOLE CTR → WAIT HOLE CTR (VRITW) 978
L TRANS WAIT HOLE COUNT → PUNCH HOLE COUNT (VWTP) 978
H Ø → PUN HOLE CTR (VCLP) 978
H PLUS ONE → PUN HOLE CTR (VPPI) 978
L PUN HOLE COUNT → POST READ HOLE COUNT (VPTR2) 978
H MINUS ONE → POST RD HOLE CTR (VPCNT) 978
H PUN END (Ø → POST RD HOLE CTR: 1 → DVCE END) (VPEP) 978

NOTE:
R/P INDICATES CARD USED FOR READ/PUNCH FEATURE.

DWG NO. 3842979

COMPANY CONFIDENTIAL INFORMATION

THIS DOCUMENT CONTAINS CONFIDENTIAL INFORMATION OF THE SPERRY RAND CORPORATION. IN CONSIDERATION OF THE RECEIPT OF THIS DOCUMENT, THE RECIPIENT AGREES NOT TO REPRODUCE, COPY, USE OR TRANSMIT THIS DOCUMENT AND/OR THE INFORMATION THEREIN CONTAINED, IN WHOLE OR IN PART, OR TO SUFFER SUCH ACTION BY OTHERS, FOR ANY PURPOSE, EXCEPT WITH THE WRITTEN PERMISSION, FIRST OBTAINED, OF SPERRY RAND CORPORATION, AND FURTHER AGREES TO SURRENDER SAME TO SPERRY RAND CORPORATION UPON DEMAND.

UNLESS OTHERWISE SPECIFIED
DIMENSIONS IN INCHES TOL. ON
2 PLACE DECIMALS ± | 3 PLACE DECIMALS ± | ANGLES ±
HOLE DIA. TOL.
0 THRU .250 + .003 − .002 | .251 THRU .500 + .005 − .003 | .501 AND LARGER + .010 − .005
THREADS: EXT. CL 2A, INT CL 2B
COMMODITY CODE

| | | |
|---|---|---|
| LAYOUT | H. PORTER | DATE 3-16-67 |
| DRAFTSMAN | H. Porter | 3-16-67 |
| CHECKER | [illegible] | 5/1/67 |
| ENGINEER | [illegible] | 5/1/67 |
| APPROVAL | [illegible] | 5/1/67 |

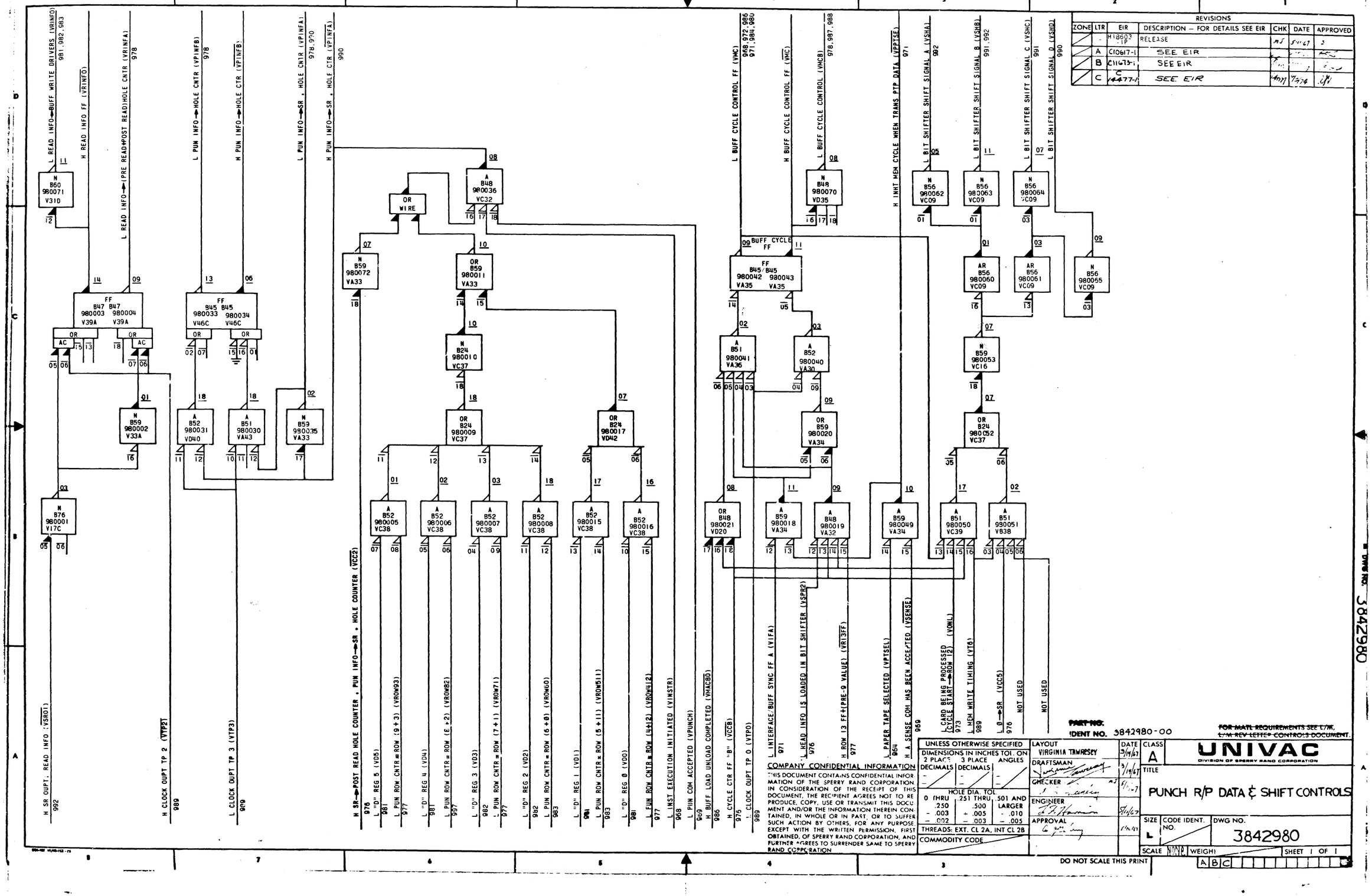
PAT. NO.
IDENT NO. 3842979-00
~~FOR MATL REQUIREMENTS SEE L/M, L/M REV LETTER CONTROLS DOCUMENT.~~

CLASS A
UNIVAC
DIVISION OF SPERRY RAND CORPORATION

TITLE
HOLE COUNTERS

SIZE D | CODE IDENT. NO. | DWG NO. 3842979
SCALE | WEIGHT | SHEET 1 OF 1
A B

DO NOT SCALE THIS PRINT




| REVISIONS | | | | | |
|---|---|---|---|---|---|
| ZONE | LTR | EIR | DESCRIPTION – FOR DETAILS SEE EIR | CHK | DATE | APPROVED |
| | - | H18603-1P | RELEASE | MS | 5/4/67 | S |
| | A | C10617-1 | SEE EIR | [illegible] | [illegible] | [illegible] |
| | B | C11673-1 | SEE EIR | [illegible] | [illegible] | [illegible] |
| | C | C 14477-1 | SEE EIR | MM | 7/7/67 | [illegible] |

DWG NO. 3842980

PART NO.
IDENT NO. 3842980-00

~~FOR MATL REQUIREMENTS SEE L/M. L/M REV LETTER CONTROLS DOCUMENT.~~

COMPANY CONFIDENTIAL INFORMATION

THIS DOCUMENT CONTAINS CONFIDENTIAL INFORMATION OF THE SPERRY RAND CORPORATION IN CONSIDERATION OF THE RECEIPT OF THIS DOCUMENT, THE RECIPIENT AGREES NOT TO REPRODUCE, COPY, USE OR TRANSMIT THIS DOCUMENT AND/OR THE INFORMATION THEREIN CONTAINED, IN WHOLE OR IN PART, OR TO SUFFER SUCH ACTION BY OTHERS, FOR ANY PURPOSE EXCEPT WITH THE WRITTEN PERMISSION, FIRST OBTAINED, OF SPERRY RAND CORPORATION, AND FURTHER AGREES TO SURRENDER SAME TO SPERRY RAND CORPORATION.

| UNLESS OTHERWISE SPECIFIED | | | |
|---|---|---|---|
| DIMENSIONS IN INCHES TOL. ON | | | |
| 2 PLACE DECIMALS | 3 PLACE DECIMALS | ANGLES | |
| - | - | - | |
| - | - | - | |
| HOLE DIA. TOL | | | |
| 0 THRU .250 - .003 - .002 | .251 THRU .500 + .005 - .003 | .501 AND LARGER - .010 - .005 | |
| THREADS: EXT. CL 2A, INT CL 2B | | | |
| COMMODITY CODE | | | |

| | | |
|---|---|---|
| LAYOUT | VIRGINIA TAWRESEY | 3/14/67 |
| DRAFTSMAN | | 3/14/67 |
| CHECKER | | 5/[illegible]/67 |
| ENGINEER | | 5/16/67 |
| APPROVAL | | 5/16/67 |

DO NOT SCALE THIS PRINT

UNIVAC
DIVISION OF SPERRY RAND CORPORATION

CLASS A

TITLE: PUNCH R/P DATA & SHIFT CONTROLS

| SIZE | CODE IDENT. NO. | DWG NO. |
|---|---|---|
| L | | 3842980 |

SCALE NONE | WEIGHT | SHEET 1 OF 1

A B C

| REVISIONS | | | | | | |
|---|---|---|---|---|---|---|
| ZONE | LTR | EIR | DESCRIPTION — FOR DETAILS SEE EIR | CHK | DATE | APPROVED |
| | - | H-18603-18 | RELEASE | MJ | 5-11-67 | GJ |
| | A | H-18817-1 | B WAS 3 ON INP ON COMP 025 | MJ | 7-28-67 | GJ |

NOTE:
(80RP) INDICATES COMPONENTS USED FOR 80 COL READ PUNCH ONLY.

L "B" DATA REG Ø (VB0) 959,995
H "B" DATA REG Ø (VB0) 959
L "D" REG Ø (VD0) 958,980,995
H "D" REG Ø (VD0) 958
L "B" DATA REG 1 (VB1) 959,995
H "B" DATA REG 1 (VB1) 959
L "D" REG 1 (VD1) 958,980,995
H "D" REG 1 (VD1) 958
H BUFF WRITE DRIVER 0 (VWR0) 987,988
H BUFF WRITE DRIVER 1 (VWR1) 987,988

E16 F05 — FF B171 981025 981026 VE/F37 — OR — A F02 E14 E18 — A F07 E14 E15
E10 E02 — FF B171 981023 981024 VE/F37 — OR — E01 — A E11 E04
F04 E17 — FF B171 981031 981032 VE/F37 — OR — A F01 E14 E18 — A E08 E14 E13
E06 E03 — FF B171 981027 981028 VE/F37 — OR — E01 — A E12 E05

A B171 981021 VE/F37 E09 E10
A B171 981022 VE/F37 F03 E02
OR B54 981003 VE31 05 07 08 06 — A B52 981001 VE30 07 08 — A B51 981002 VE33 03 05 04 06
A B52 981010 VD38 07 08
N B24 981007 VE32 18 — OR B24 981006 VE32 /18 — A B52 981004 VE30 05 06 — A B52 981005 VE30 09 04
OR B51 981009 VE34 16 18 17 (80RP) — A B52 981008 VF34 07 08
A B171 981030 VE/F37 F03 E03
A B171 981029 VE/F37 E06 E09
OR B54 981020 VE31 17 16 18 — A B51 981018 VE33 14 15 13 16 — A B52 981019 VE30 10 15
A B52 981017 VD38 05 06
N B24 981014 VE32 01 — OR B24 981013 VE32 /01 — A B52 981011 VE30 11 12 — A B52 981012 VE30 13 14
OR B51 981016 VE34 05 06 08 07 (80RP) — A B52 981015 VF34 05 06

OR B171 981036 VE/F37 F12 — F17 F15 F14
OR B171 981040 VE F37 F18 — F14 F13 F16
A B171 981033 VE/F37 F08 E10 F07
A B51 981034 VE33 07 08 09
A B171 981035 VE F37 E16 F11 F09
A B171, 981037 VE F37 E06 F07 F06
A B51 981038 VE33 10 12 11
A B171 981039 VE F37 F04 F10 F09

H CLR DATA REG "B" (VCLRB) 972
L D REG→B REG (VDTOB) 972
L BUS OUT 0 (VOB0) 955
L LOAD BUFF IMAGE MODE (VLIM) 972
H BUS OUT 1 (VOB1) 955
H BUS OUT 3 (VOB3) 955
L LOAD BUFF COMPRESS MODE (VLEX) 972
L 0→D REG (VCLRD) 972
L PUN BUFF SENSE AR BIT Ø (VM1SO) 987
L PUN BUFF SENSE AR→D REG (VM1TOD) 972
L BUS OUT 7 (VOB7) 955
L BUS OUT 2 (VOB2) 955
L READ BUFF SENSE AR BIT Ø (VM2SO) 988
L READ BUFF SENSE AR→D REG (VM2TOD) 972
H BUS OUT 2 (VOB2) 955
L BUS OUT 1 (VOB1) 955
L PUN BUFF SENSE AR BIT 1 (VM1SI) 987
L BUS OUT 6 (VOB6) 955
L BUS OUT 3 (VOB3) 955
L READ BUFF SENSE AR BIT 1 (VM2S1) 988
H INHT READ BUFF RECIRCULATION (ROW 9+3) (VRR93) 972
L D REG→MEM (VDTOM) 972
L PUN ROW CNTR=ROW (4+12) (VROW412) 977
L GATE READ INFO→BUFF WRITE DRIVERS (VRTOM) 972
L "B" REG→BUFF WHEN LOADING COMPRESS MODE (VBTOM) 972
H BUFF INHT TIMING FF (VT56D) 989
L PUN ROW CNTR=ROW (5+11) (VROW511) 977
L READ INFO→BUFF WRITE DRIVERS (VRINFO) 980

COMPANY CONFIDENTIAL INFORMATION
THIS DOCUMENT CONTAINS CONFIDENTIAL INFORMATION OF THE SPERRY RAND CORPORATION. IN CONSIDERATION OF THE RECEIPT OF THIS DOCUMENT, THE RECIPIENT AGREES NOT TO REPRODUCE, COPY, USE OR TRANSMIT THIS DOCUMENT AND/OR THE INFORMATION THEREIN CONTAINED, IN WHOLE OR IN PART, OR TO SUFFER SUCH ACTION BY OTHERS, FOR ANY PURPOSE EXCEPT WITH THE WRITTEN PERMISSION, FIRST OBTAINED, OF SPERRY RAND CORPORATION, AND FURTHER AGREES TO SURRENDER SAME TO SPERRY RAND CORPORATION UPON DEMAND.

UNLESS OTHERWISE SPECIFIED
DIMENSIONS IN INCHES TOL. ON 2 PLACE DECIMALS ± / 3 PLACE DECIMALS ± / ANGLES ±
HOLE DIA. TOL.: 0 THRU .250 + .003 − .002 / .251 THRU .500 + .005 − .003 / .501 AND LARGER + .010 − .005
THREADS: EXT. CL 2A, INT CL 2B
COMMODITY CODE

LAYOUT H. PORTER 3-21-67
DRAFTSMAN H. Porter 3-21-67
CHECKER M. Hanking MJ 5-11-67
ENGINEER E. B. Hamm 5/16/67
APPROVAL G. Jeffery 5/16/67

DO NOT SCALE THIS PRINT

~~PUNCH USE~~
IDENT NO. 3842981-00
~~FOR MATL REQUIREMENTS SEE L/M, L/M REV LETTER CONTROLS DOCUMENT.~~

CLASS A
UNIVAC DIVISION OF SPERRY RAND CORPORATION
TITLE: DATA REGISTER BITS 0-1
SIZE D | CODE IDENT. NO. | DWG NO. 3842981
SCALE | WEIGHT | SHEET 1 OF 1

DWG NO. 3842981

| REVISIONS | | | | | | |
|---|---|---|---|---|---|---|
| ZONE | LTR | EIR | DESCRIPTION – FOR DETAILS SEE EIR | CHK | DATE | APPROVED |
| | | H18603-IP | RELEASE | MS | 5/1/67 | |
| | A | H-18817-1 | B WAS 3 ON INP ON COMP 025 | MS | 7/28/67 | |

NOTE:
80RP INDICATES COMPONENT USED WITH 80 COL READ PUNCH ONLY.

L "B" DATA REG 2 (VB2) 959
H "B" DATA REG 2 (VB2) 959
L "D" REG 2 (VD2) 959, 980, 995
H "D" REG 2 (VD2) 958
L "B" DATA REG 3 (VB3) 958
H "B" DATA REG 3 (VB3) 958
L "D" REG 3 (VD3) 959, 980, 995
H "D" REG 3 (VD3) 958
H BUFF WRITE DRIVER 2 (VWR2) 987, 988
H BUFF WRITE DRIVER 3 (VWR3) 987, 988

FF B171 982025 982026 VE/F36 — E16, F05
FF B171 982023 982024 VE/F36 — E10, E02
FF B171 982031 982032 VE/F36 — F04, E17
FF B171 982027 982028 VE/F36 — E06, E03

A B171 982021 VE/F36
A B171 982022 VE/F36
OR B54 982003 VE31
A B52 982010 VD38
N B24 982007 VE32
A B171 982030 VE/F36
A B171 982029 VE/F36
OR B54 982020 VE31
A B52 982017 VD38
N B24 982014 VF31
OR B171 982036 VE/F36 — F12
OR B171 982040 VE F36 — F13
A B171 982033 VE/F36
A B51 982034 VF32
A B171 982035 VE/F36
A B171 982037 VE F36
A B51 982038 VF32
A B171 982039 VE/F36

A B51 982001 VF32
OR B24 982006 VE32 /17 — E 10/
OR B54 982009 VE34 80RP
A B51 982018 VF29
OR B24 982013 VF31 /18 — E 11/
OR B54 982016 VE34 80RP
A B52 982004 VF30
A B52 982005 VF30
A B52 982008 VF34 80RP
A B51 982011 VF32
A B52 982012 VF30
A B52 982015 VF34 80RP

H CLR DATA REG "B" (VCLRB) 972
L D REG→B REG (VDTOB) 972
L LOAD BUFF COMPRESS MODE (VLEX) 972
L BUS OUT 2 (VO82) 955
L Ø→D REG (VCLRD) 972
L PUN BUFF SENSE AR BIT 2 (VM1S2) 987
L PUN BUFF SENSE AR→D REG (VM1TOD) 972
L BUS OUT 5 (VO85) 955
L BUS OUT 4 (VO84) 955
L READ BUFF SENSE AR BIT 2 (VM2S2) 988
L READ BUFF SENSE AR→D REG (VM2TOD) 972
L BUS OUT 1 (VO81) 955
H BUS OUT 3 (VO83) 955
L PUN BUFF SENSE AR BIT 3 (VM1S3) 987
L BUS OUT 3 (VO83) 955
H BUS OUT 1 (VO81) 955
L LOAD BUFF IMAGE MODE (VLIM) 972
L READ BUFF SENSE AR BIT 3 (VM2S3) 988
H INHT READ BUFF RECIRCULATION ROW (9+3) (VRR93) 972
L D REG→MEM (VDTOM) 972
L PUN ROW CNTR=ROW (6+9) (VROW60) 977
L GATE READ INFO→BUFF WRITE DRIVERS (VRTOM) 972
L "B" REG→BUFF WHEN LOADING COMPRESS MODE (VBTOM) 972
H BUFF INHT TIMING FF (VT560) 989
L PUN ROW CNTR=ROW (7+1) (VROW71) 977
L READ INFO→BUFF WRITE DRIVERS (VRINFO) 980

COMPANY CONFIDENTIAL INFORMATION
THIS DOCUMENT CONTAINS CONFIDENTIAL INFORMATION OF THE SPERRY RAND CORPORATION. IN CONSIDERATION OF THE RECEIPT OF THIS DOCUMENT, THE RECIPIENT AGREES NOT TO REPRODUCE, COPY, USE OR TRANSMIT THIS DOCUMENT AND/OR THE INFORMATION THEREIN CONTAINED, IN WHOLE OR IN PART, OR TO SUFFER SUCH ACTION BY OTHERS, FOR ANY PURPOSE, EXCEPT WITH THE WRITTEN PERMISSION, FIRST OBTAINED, OF SPERRY RAND CORPORATION, AND FURTHER AGREES TO SURRENDER SAME TO SPERRY RAND CORPORATION UPON DEMAND.

UNLESS OTHERWISE SPECIFIED
DIMENSIONS IN INCHES TOL. ON 2 PLACE DECIMALS ±, 3 PLACE DECIMALS ±, ANGLES ±
HOLE DIA. TOL: 0 THRU .250 +.003 −.002; .251 THRU .500 ±.005 −.003; .501 AND LARGER ±.010 −.005
THREADS: EXT. CL 2A, INT CL 2B
COMMODITY CODE

LAYOUT H. PORTER 2-28-67
DRAFTSMAN John Campbell 3-23-67
CHECKER M. F. Harding MS 5/1/67
ENGINEER T. F. Harman 5/4/67
APPROVAL A. Perlmuter 5/4/67

PART NO. ~~PART NO.~~
IDENT NO. 3842982-00
~~FOR MATL REQUIREMENTS SEE L/M, L/M REV LETTER CONTROLS DOCUMENT.~~

CLASS A
UNIVAC DIVISION OF SPERRY RAND CORPORATION
TITLE: DATA REGISTER BITS 2&3
SIZE D | CODE IDENT. NO. | DWG NO. 3842982
SCALE | WEIGHT | SHEET 1 OF 1

DO NOT SCALE THIS PRINT

DWG NO. 3842982

| REVISIONS | | | | | | |
|---|---|---|---|---|---|---|
| ZONE | LTR | EIR | DESCRIPTION – FOR DETAILS SEE EIR | CHK | DATE | APPROVED |
| | | H18603-IP | RELEASE | MJ | 5-11-67 | JJ |
| | A | H18817-1 | REV. COMP 025, 011 & 024 | MJ | 5-24-67 | JJ |

L "B" REG 4 (VB4)
H "B" DATA REG 4 (VB4) 958
L "D" REG 4 (VD4) 959, 980, 995
H "B" REG 4 (VD4)
L "B" DATA REG 5 (VB5) 995
H "B" DATA REG 5 (VB5) 958
L "D" REG 5 (VD5) 958, 959, 980
H "D" REG 5 (VD5)
H BUFF WRITE DRIVER 4 (VWR4) 987, 988
H BUFF WRITE DRIVER 5 (VWR5) 987, 988

FF B171 983025 983026 VE/F35 — E16, F05
FF B171 983023 983024 VE/F35 — E10, E02
FF B171 983031 983032 VE/F35 — F04, E17
FF B171 983027 983028 VE/F35 — E06, E03

OR B171 983036 VE F35 — F12
OR B171 983040 VE F35 — F18

A B171 983021 VE/F35
A B171 983022 VE/F35
OR B54 983003 VE31
A B52 983001 VF30
A B52 983010 VD38
N B24 983007 VF31
OR B24 983006 VF31
OR B54 983009 VE34
A B51 983004 VF33
A B52 983005 VF30
A B52 983008 VF34
A B171 983030 VE/F35
A B171 983029 VE/F35
OR B54 983020 VE31
A B52 983018 VE29
A B52 983017 VD38
N B24 983014 VF31
OR B24 983013 VF31
OR B54 983016 VE34
A B51 983011 VF33
A B52 983012 VF30
A B52 983015 VF34
A B171 983033 VE/F35
A B51 983034 VF33
A B171 983035 VE/F35
A B171 983037 VE F35
A B51 983038 VF33
A B171 983039 VE F35

H CLR DATA REG "B" (VCLRB) 972
L D REG→B REG (VDTOB) 972
L BUS OUT 4 (VOB4) 955
L LOAD BUFF COMPRESS MODE (VLEX) 972
L D→D REG (VCLRD) 972
L PUN BUFF SENSE AR BIT 4 (VM1S4) 987
L PUN BUFF SENSE AR→D REG (VM1TOD) 972
L BUS OUT 1 (VOB1) 955
L BUS OUT 3 (VOB3) 955
L BUS OUT 6 (VOB6) 955
L READ BUFF SENSE AR BIT 4 (VM2S4) 988
L READ BUFF SENSE AR→D REG (VM2TOD) 972
L BUS OUT 0 (VOB0) 955
L PUN BUFF SENSE AR BIT 5 (VM1S5) 987
H BUS OUT 2 (VOB2) 955
H BUS OUT 1 (VOB1) 955
L LOAD BUFF IMAGE MODE (VLIM) 972
L BUS OUT 7 (VOB7) 955
L READ BUFF SENSE AR BIT 5 (VM2S5) 988

H INHT READ BUFF RECIRCULATION (ROW 943) (VRR93) 972
L D REG→MEM (VDTOM) 972
L PUN ROW CNTR = ROW (842) (VROW82) 977
L GATE READ INFO→BUFF WRITE DRIVERS (VRTOM) 972
L "B" REG→BUFF WHEN LOADING COMPRESS MODE (VBTOM) 972
H BUFF INHT TIMING FF (VT55D) 989
L PUN ROW CNTR = ROW (943) (VROW93) 977
L READ INFO→BUFF WRITE DRIVERS (VRINFO) 980

NOTE: 80RP INDICATE COMPONENT USED FOR 80 COL READ PUNCH ONLY.

DWG NO. 3842983

~~PART NO.~~
IDENT NO. 3842983-00

~~FOR MATL REQUIREMENTS SEE L/M. L/M REV LETTER CONTROLS DOCUMENT.~~

COMPANY CONFIDENTIAL INFORMATION
THIS DOCUMENT CONTAINS CONFIDENTIAL INFORMATION OF THE SPERRY RAND CORPORATION. IN CONSIDERATION OF THE RECEIPT OF THIS DOCUMENT, THE RECIPIENT AGREES NOT TO REPRODUCE, COPY, USE OR TRANSMIT THIS DOCUMENT AND/OR THE INFORMATION THEREIN CONTAINED, IN WHOLE OR IN PART, OR TO SUFFER SUCH ACTION BY OTHERS, FOR ANY PURPOSE, EXCEPT WITH THE WRITTEN PERMISSION, FIRST OBTAINED, OF SPERRY RAND CORPORATION, AND FURTHER AGREES TO SURRENDER SAME TO SPERRY RAND CORPORATION UPON DEMAND.

UNLESS OTHERWISE SPECIFIED
DIMENSIONS IN INCHES TOL. ON 2 PLACE DECIMALS ± ; 3 PLACE DECIMALS ± ; ANGLES ±
HOLE DIA. TOL. 0 THRU .250 +.003 −.002 ; .251 THRU .500 +.005 −.003 ; .501 AND LARGER ±.010 −.005
THREADS: EXT. CL 2A, INT CL 2B
COMMODITY CODE

LAYOUT H. PORTER 4-20-67
DRAFTSMAN 3-30-67
CHECKER MJ 5-11-67
ENGINEER 5/11/67
APPROVAL

CLASS A

UNIVAC
DIVISION OF SPERRY RAND CORPORATION

TITLE: DATA REGISTER BITS 4 & 5

SIZE D | CODE IDENT NO. | DWG NO. 3842983

SCALE | WEIGHT | SHEET 1 OF 1

DO NOT SCALE THIS PRINT

UDI-407 99/66-152-66

| REVISIONS | | | | | | |
|---|---|---|---|---|---|---|
| ZONE | LTR | EIR | DESCRIPTION — FOR DETAILS SEE EIR | CHK | DATE | APPROVED |
| | - | H18603-1P | RELEASE | MS | 5-11-67 | [illegible] |
| | A | H-18817-1 | COLUMN WAS ROW AT OUTPUT ON 072 & 73 | [illegible] | 7-18-67 | [illegible] |

L CARD BEING PROCESSED (CYCLE START → ROW 12) (VONL) 973

L SR → BUFF & PRE READ HOLE COUNT (VCC1) 976

L READ PUN BUFF; LOAD READ BUFF; R2 BRUSHES → BUFF IF CARD FEED (VFF0) 969

L LOAD BUFF COM HAS BEEN ACCEPTED (VLBUF) 969

H RD PUN BUFF; LOAD READ BUFF; R2 BRUSHES → BUFF IF CARD FEED (VFF0) 969

L UNLOAD BUFF COM ACCEPTED (VRBUF) 969

H CLOCK OUPT TP 1 (VTP1) 989

H INITL SELECTION FF (VISEL) 964

L CLOCK OUPT TP 2 (VTP2) 989

H UPPER FIELD FF (ROW 3-15) (VRUF) 977

L SYNCHRONIZED SPT (VSPRA) 976

H CYCLE CTR FF "B" (VCCB) 976

H MEM ADRS REG Ø (VMA0) 985

H MEM ADRS REG 1 (VMA1) 986

L MEM ADRS REG Ø (VMA0) 985

L MEM ADRS REG 1 (VMA1) 985

H MEM ADRS REG 4 (VMA4) 985

H MEM ADRS REG 5 (VMA5) 985

L MEM ADRS REG 4 (VMA4) 985

L MEM ADRS REG 5 (VMA5) 985

L INTERFACE BUFF SYNC FF B (VIFB) 971

H A SENSE CON HAS BEEN ACCEPTED (VSENSE) 969

L BUFF CYCLE CONTROL FF (VMC) 980

L CLOCK OUPT TP3 (VTP3) 989

COMPANY CONFIDENTIAL INFORMATION
THIS DOCUMENT CONTAINS CONFIDENTIAL INFORMATION OF THE SPERRY RAND CORPORATION. IN CONSIDERATION OF THE RECEIPT OF THIS DOCUMENT, THE RECIPIENT AGREES NOT TO REPRODUCE, COPY, USE OR TRANSMIT THIS DOCUMENT AND/OR THE INFORMATION THEREIN CONTAINED, IN WHOLE OR IN PART, OR TO SUFFER SUCH ACTION BY OTHERS, FOR ANY PURPOSE EXCEPT WITH THE WRITTEN PERMISSION, FIRST OBTAINED, OF SPERRY RAND CORPORATION, AND FURTHER AGREES TO SURRENDER SAME TO SPERRY RAND CORPORATION UPON DEMAND.

UNLESS OTHERWISE SPECIFIED
DIMENSIONS IN INCHES TOL. ON 2 PLACE DECIMALS ± | 3 PLACE DECIMALS ± | ANGLES ±
HOLE DIA. TOL. 0 THRU .250 +.003 −.002 | .251 THRU .500 +.005 −.003 | .501 AND LARGER +.010 −.005
THREADS: EXT. CL 2A, INT CL 2B
COMMODITY CODE

| | | |
|---|---|---|
| LAYOUT | VIRGINIA TAWRESEY | 4/3/67 |
| DRAFTSMAN | [signature] | 4/3/67 |
| CHECKER | [signature] MS | 5-11-67 |
| ENGINEER | [signature] | 5/11/67 |
| APPROVAL | [signature] | 5-11-67 |

PART NO. ~~[illegible]~~
IDENT NO. 3842984-00

~~FOR MATL REQUIREMENTS SEE L/M, L/M REV LETTER CONTROLS DOCUMENT~~

DO NOT SCALE THIS PRINT

CLASS A

UNIVAC
DIVISION OF SPERRY RAND CORPORATION

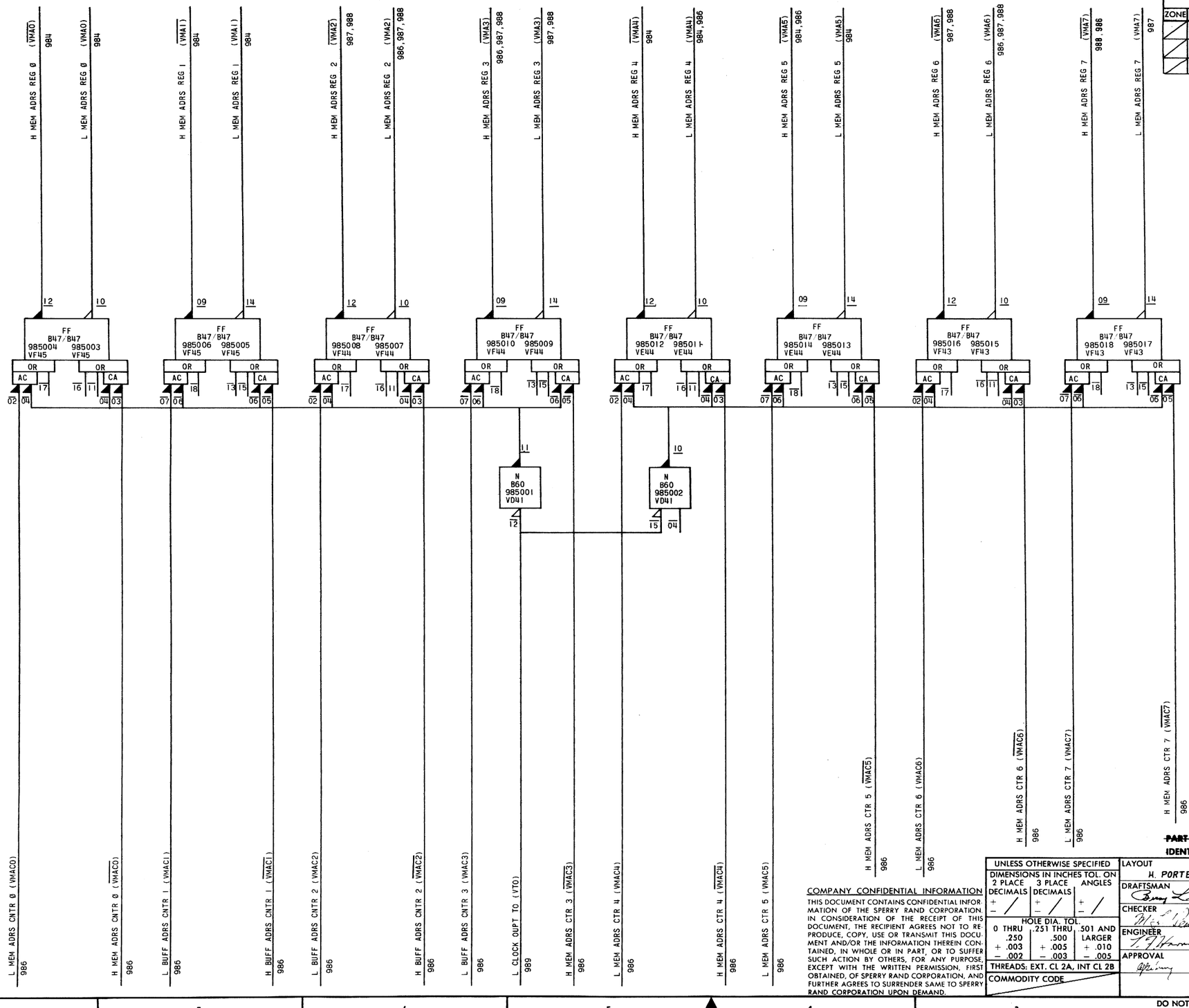
TITLE
MEMORY ADDRESS CONTROLS

SIZE D | CODE IDENT. NO. | DWG NO. 3842984

SCALE NONE | WEIGHT | SHEET 1 OF 1

DWG NO. 3842984

| REVISIONS | | | | | | |
|---|---|---|---|---|---|---|
| ZONE | LTR | EIR | DESCRIPTION — FOR DETAILS SEE EIR | CHK | DATE | APPROVED |
| | - | H18603-1P | RELEASE | MJ | 5/6/67 | DJ |
| | A | H-18817-1 | DELETED DUPLICATE INP TITLES | MJ | 7/28/67 | [illegible] |
| | B | C11673-1 | SEE EIR | DJ | 7/1/69 | [illegible] |




COMPANY CONFIDENTIAL INFORMATION

THIS DOCUMENT CONTAINS CONFIDENTIAL INFORMATION OF THE SPERRY RAND CORPORATION. IN CONSIDERATION OF THE RECEIPT OF THIS DOCUMENT, THE RECIPIENT AGREES NOT TO REPRODUCE, COPY, USE OR TRANSMIT THIS DOCUMENT AND/OR THE INFORMATION THEREIN CONTAINED, IN WHOLE OR IN PART, OR TO SUFFER SUCH ACTION BY OTHERS, FOR ANY PURPOSE EXCEPT WITH THE WRITTEN PERMISSION, FIRST OBTAINED, OF SPERRY RAND CORPORATION, AND FURTHER AGREES TO SURRENDER SAME TO SPERRY RAND CORPORATION UPON DEMAND.

| UNLESS OTHERWISE SPECIFIED | | |
|---|---|---|
| DIMENSIONS IN INCHES TOL. ON | | |
| 2 PLACE DECIMALS ± / | 3 PLACE DECIMALS ± / | ANGLES ± / |
| HOLE DIA. TOL. | | |
| 0 THRU .250 ± .003 − .002 | .251 THRU .500 ± .005 − .003 | .501 AND LARGER ± .010 − .005 |
| THREADS: EXT. CL 2A, INT CL 2B | | |
| COMMODITY CODE | | |

| | | |
|---|---|---|
| LAYOUT | H. PORTER | 3/14/67 |
| DRAFTSMAN | [illegible] | 3/14/67 |
| CHECKER | MJ | 5/1/67 |
| ENGINEER | [illegible] | 5/1/67 |
| APPROVAL | [illegible] | 5/1/67 |

~~PART NO.~~
IDENT NO. 3842985-00

~~FOR MATL REQUIREMENTS SEE L/M; L/M REV LETTER CONTROLS DOCUMENT.~~

CLASS A

UNIVAC
DIVISION OF SPERRY RAND CORPORATION

TITLE
MEMORY ADDRESS REGISTER

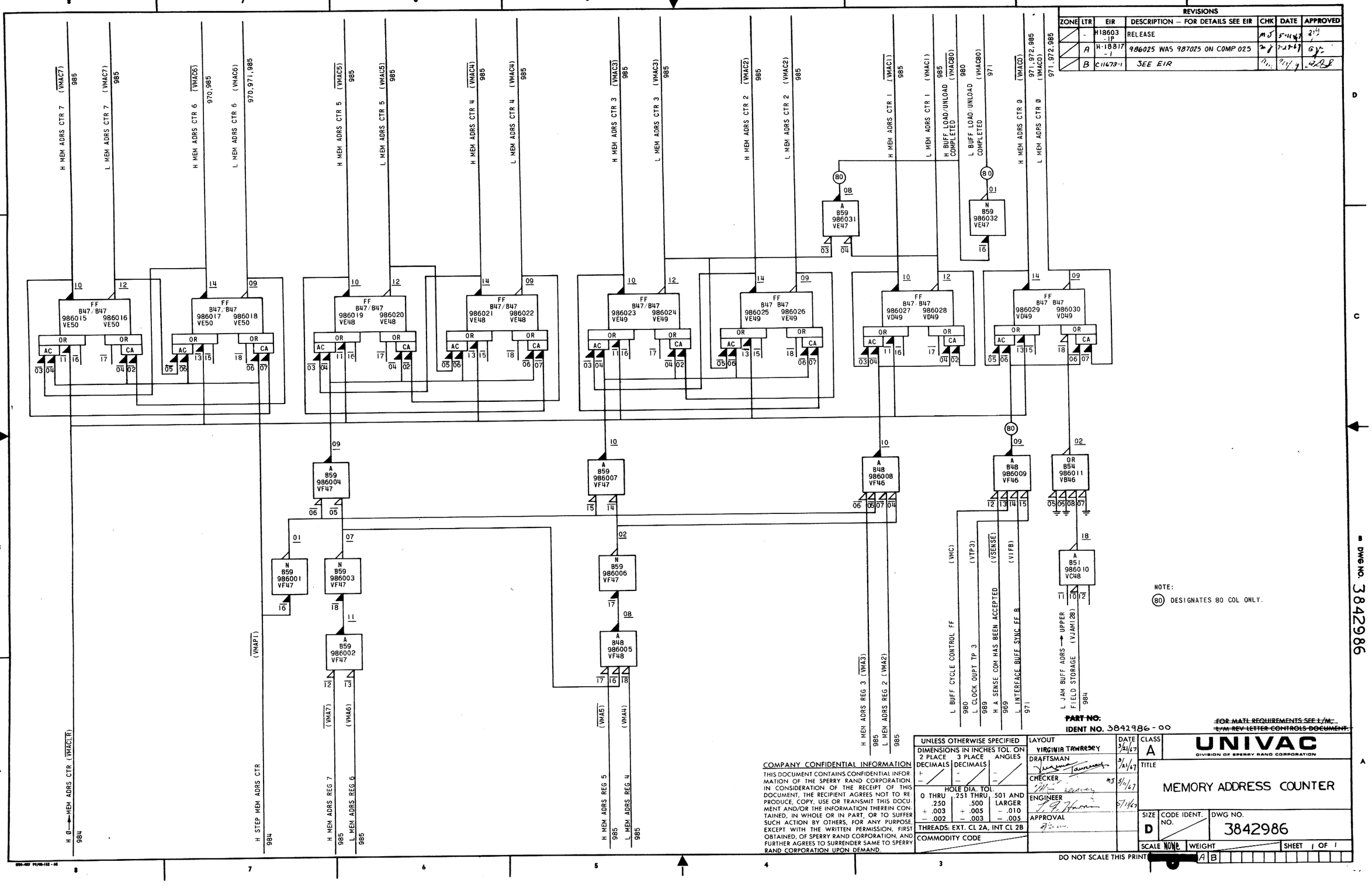
| SIZE | CODE IDENT. NO. | DWG NO. |
|---|---|---|
| D | | 3842985 |

SCALE NONE | WEIGHT | SHEET 1 OF 1

DO NOT SCALE THIS PRINT

DWG NO. 3842985

UNIVAC 1004-427 99/45-152 • 66




| REVISIONS | | | | | | |
|---|---|---|---|---|---|---|
| ZONE | LTR | EIR | DESCRIPTION — FOR DETAILS SEE EIR | CHK | DATE | APPROVED |
| | - | H18603-1P | RELEASE | MJ | 5-11-67 | |
| | A | H-18817-1 | 986025 WAS 987025 ON COMP 025 | MJ | 7-27-67 | |
| | B | C11673-1 | SEE EIR | | 9/1/67 | |

NOTE:
(80) DESIGNATES 80 COL ONLY.

DWG NO. 3842986

PART NO:
IDENT NO. 3842986-00

~~FOR MATL REQUIREMENTS SEE L/M;~~
~~L/M REV LETTER CONTROLS DOCUMENT.~~

COMPANY CONFIDENTIAL INFORMATION
THIS DOCUMENT CONTAINS CONFIDENTIAL INFORMATION OF THE SPERRY RAND CORPORATION. IN CONSIDERATION OF THE RECEIPT OF THIS DOCUMENT, THE RECIPIENT AGREES NOT TO REPRODUCE, COPY, USE OR TRANSMIT THIS DOCUMENT AND/OR THE INFORMATION THEREIN CONTAINED, IN WHOLE OR IN PART, OR TO SUFFER SUCH ACTION BY OTHERS, FOR ANY PURPOSE, EXCEPT WITH THE WRITTEN PERMISSION, FIRST OBTAINED, OF SPERRY RAND CORPORATION. AND FURTHER AGREES TO SURRENDER SAME TO SPERRY RAND CORPORATION UPON DEMAND.

| UNLESS OTHERWISE SPECIFIED | | | |
|---|---|---|---|
| DIMENSIONS IN INCHES TOL. ON 2 PLACE DECIMALS | 3 PLACE DECIMALS | ANGLES | |
| + / − | − | − | |
| HOLE DIA. TOL. 0 THRU .250 + .003 − .002 | .251 THRU .500 + .005 − .003 | .501 AND LARGER − .010 − .005 | |
| THREADS: EXT. CL 2A, INT CL 2B | | | |
| COMMODITY CODE | | | |

| | | |
|---|---|---|
| LAYOUT | VIRGINIA TAWRESEY | 3/21/67 |
| DRAFTSMAN | | 3/21/67 |
| CHECKER | MJ | 5/1/67 |
| ENGINEER | | 5/1/67 |
| APPROVAL | | |

CLASS A

UNIVAC
DIVISION OF SPERRY RAND CORPORATION

TITLE
MEMORY ADDRESS COUNTER

| SIZE | CODE IDENT. NO. | DWG NO. |
|---|---|---|
| D | | 3842986 |

SCALE NONE | WEIGHT | SHEET 1 OF 1

DO NOT SCALE THIS PRINT

| REVISIONS | | | | | | |
|---|---|---|---|---|---|---|
| ZONE | LTR | EIR | DESCRIPTION — FOR DETAILS SEE EIR | CHK | DATE | APPROVED |
| | - | H18603-1P | RELEASE | MJ | 5-11-67 | |
| | A | H-18669-1 | REV. PIN NO'S OF COLUMN INPUTS | RJ | 6-14-67 | |

L PUN BUFF SENSE AR BIT 5 (VMIS5) 983 987032 E13
L PUN BUFF SENSE AR BIT 4 (VMIS4) 983 987033 E12
L PUN BUFF SENSE AR BIT 3 (VMIS3) 982 987034 E06
L PUN BUFF SENSE AR BIT 2 (VMIS2) 982 987035 F14
L PUN BUFF SENSE AR BIT 1 (VMIS1) 981 987036 F13
L PUN BUFF SENSE AR BIT 0 (VMIS0) 981 987037 F10

A 418 987002 VE/F38 — E18/, E17/
A 418 987003 VE/F38 — E17/, E16/
A 418 987004 VE/F38 — E18/, E15/
A 418 987005 VE/F38 — E16/, E15/
AR 418 987006 VE/F38 — F06/
AR 418 987007 VE/F38 — F05/
AR 418 987008 VE/F38 — F04/, F03/
AR 418 987009 VE/F38 — F03/, F02/
AR 418 987010 VE/F38 — F04/, F01/
AR 418 987011 VE/F38 — F02/, F01/

A B51 987013 VD39 — 07/, 08/, 09/ — /01
A B51 987014 VD39 — 10/, 11/, 12/ — /18

XFMR 418 987012 VE/F38
XFMR 418 987015 VE/F38

XFMR 418 987017 VE/F38 — /F13
XFMR 418 987018 VE/F38 — /F12
XFMR 418 987019 VE/F38 — /F14
XFMR 418 987020 VE/F38 — /F11
XFMR 418 987021 VE/F38 — /F16
XFMR 418 987022 VE/F38 — /F18
XFMR 418 987023 VE/F38 — /F15
XFMR 418 987024 VE/F38 — /F17

COL. 1,5,9,13 F06/ 987045
COL. 4,8,12,16 F05/ 987046
COL. 2,6,10,14 E16/ 987047
COL. 3,7,11,15 E15/ 987048
E11/ 987049
E10/ 987050
E18/ 987051
E17/ 987052
F01/ 987053
F02/ 987054
F03/ 987055
F04/ 987056
987057

COLUMN INPUTS
SENSE OUTPUTS
256 CHAR CORE STACK TYPE 416 VE F39
ROW INPUTS
INHIBIT INPUTS

F08 F07 E07 E03 E01 E02 E04 E05 F15 F16 F17 F18
987058 987059 987060 987061 987062 987063 987064 987065 987066 987067 987068

L ADRS BUFF ROW 13-16 (VRI316A) 984
H ADRS BUFF ROW 13-16 RET (VRI316B) 984
L ADRS BUFF ROW 1-4 (VRI14A) 984
H ADRS BUFF ROW 1-4 RET (VRI14B) 984
L ADRS BUFF ROW 5-8 (VRR584A) 984
H ADRS BUFF ROW 5-8 RET (VRR588) 984
L ADRS BUFF ROW 9-12 (VRR912A) 984
H ADRS BUFF ROW 9-12 RET (VRR912B) 984

E14/ 987069
E09/ 987070
E08/ 987071
F12/ 987072
F11/ 987073
F09/ 987074

INHIBIT DRIVERS

AR 418 987038 VE/F38 — E14 — E10 — H BUFF WRITE DRIVER 0 (VWR0) 981
AR 418 987039 VE/F38 — E13 — E09 — H BUFF WRITE DRIVER 1 (VWR1) 981
AR 418 987040 VE F38 — E11 — E04 — H BUFF WRITE DRIVER 2 (VWR2) 982
AR 418 987041 VE F38 — E12 — E03 — H BUFF WRITE DRIVER 3 (VWR3) 982
AR 418 987042 VE F38 — E05 — E02 — H BUFF WRITE DRIVER 4 (VWR4) 983
AR 418 987043 VE F38 — E06 — E01 — H BUFF WRITE DRIVER 5 (VWR5) 983

L MEM READ TIMING FF (VT1D) 989
L SELECT PUN BUFF (VWSEL1) 984
L BUFF CYCLE CONTROL (VMCB) 980
L MEM WRITE TIMING (VT6) 989

H MEM ADRS REG 6 (VMA6) 985
H MEM ADRS REG 7 (VMA7) 985
L MEM ADRS REG 6 (VMA6) 985
L MEM ADRS REG 7 (VMA7) 985
H MEM ADRS REG 2 (VMA2) 985
L MEM ADRS REG 3 (VMA3) 985
H MEM ADRS REG 2 (VMA2) 985
L MEM ADRS REG 3 (VMA3) 985

L ADRS BUFF COL 9-12 (VMC912A) 984
H ADRS BUFF COL 9-12 RET (VMC912B) 984
L ADRS BUFF COL 1-4 (VMC14A) 984
H ADRS BUFF COL 1-4 RET (VMC14B) 984
L ADRS BUFF COL 5-8 (VMC584A) 984
L ADRS BUFF COL 5-8 RET (VMC588) 984
L ADRS BUFF COL 13-16 (VCI316A) 984
H ADRS BUFF COL 13-16 RET (VCI316B) 984

IDENT NO. 3842987-00

FOR MATL REQUIREMENTS SEE L/M; L/M REV LETTER CONTROLS DOCUMENT.

COMPANY CONFIDENTIAL INFORMATION
THIS DOCUMENT CONTAINS CONFIDENTIAL INFORMATION OF THE SPERRY RAND CORPORATION. IN CONSIDERATION OF THE RECEIPT OF THIS DOCUMENT, THE RECIPIENT AGREES NOT TO REPRODUCE, COPY, USE OR TRANSMIT THIS DOCUMENT AND/OR THE INFORMATION THEREIN CONTAINED, IN WHOLE OR IN PART, OR TO SUFFER SUCH ACTION BY OTHERS, FOR ANY PURPOSE, EXCEPT WITH THE WRITTEN PERMISSION, FIRST OBTAINED, OF SPERRY RAND CORPORATION, AND FURTHER AGREES TO SURRENDER SAME TO SPERRY RAND CORPORATION UPON DEMAND.

UNLESS OTHERWISE SPECIFIED
DIMENSIONS IN INCHES TOL. ON 2 PLACE DECIMALS ±, 3 PLACE DECIMALS ±, ANGLES ±
HOLE DIA. TOL. 0 THRU .250 +.003 −.002; .251 THRU .500 +.005 −.003; .501 AND LARGER +.010 −.005
THREADS: EXT. CL 2A, INT CL 2B
COMMODITY CODE

| | | |
|---|---|---|
| LAYOUT | H. PORTER | 3-67 |
| DRAFTSMAN | H. Porter | 4-3-67 |
| CHECKER | MJ | 5/1/67 |
| ENGINEER | | 5/1/67 |
| APPROVAL | | |

DO NOT SCALE THIS PRINT

CLASS A
UNIVAC
DIVISION OF SPERRY RAND CORPORATION
TITLE: MEMORY 1
SIZE D | CODE IDENT NO. | DWG NO. 3842987
SCALE | WEIGHT | SHEET 1 OF 1

DWG NO. 3842987

| REVISIONS | | | | | | |
|---|---|---|---|---|---|---|
| ZONE | LTR | EIR | DESCRIPTION — FOR DETAILS SEE EIR | CHK | DATE | APPROVED |
| | - | H18603 -1P | RELEASE | MS | 5-4-67 | |
| | A | H-18669 -1 | REV. PIN NO'S OF COLUMN INPUTS | | 6-14-67 | |

L READ BUFF SENSE AR BIT 5 (VM2S5) 983 988032 E13
L READ BUFF SENSE AR BIT 4 (VM2S4) 983 988033 E12
L READ BUFF SENSE AR BIT 3 (VM2S3) 982 988034 E06
L READ BUFF SENSE AR BIT 2 (VM2S2) 982 988035 F14
L READ BUFF SENSE AR BIT 1 (VM2S1) 981 988036 F13
L READ BUFF SENSE AR BIT 0 (VM2S0) 981 988037 F10

SENSE OUTPUTS

COLUMN INPUTS

256 CHAR CORE STACK TYPE 416 VE F41

INHIBIT INPUTS

ROW INPUTS

COL. 1,5,9,13 F06/ 988044
COL. 4,8,12,16 F05/ 988045
COL. 2,6,10,14 E16/ 988046
COL. 3,7,11,15 E15/ 988047
E11/ 988048
E10/ 988049
E18/ 988050
E17/ 988051
F01/ 988052
F02/ 988053
F03/ 988054
F04/ 988055
988056
F08 F07 E07 F03 E01 E02 E04 E05 F15 F16 F17 F18
988057 988058 988059 988060 988061 988062 988063 988064 988065 988066 988067

E18/ A 418 988002 VE/F42
E17/
E17/ A 418 988003 VE/F42
E16/
E18/ A 418 988004 VE/F42
E15/
E16/ A 418 988005 VE/F42
E15/
F06/ AR 418 988006 VE/F42
F05/ AR 418 988007 VE/F42
F04/ AR 418 988008 VE/F42
F03/
F03/ AR 418 988009 VE/F42
F02/
F04/ AR 418 988010 VE/F42
F01/
F02/ AR 418 988011 VE/F42
F01/

07/ A B51 988013 VE43 /01
08/
09/
10/ A B51 988014 VE43 /18
11/
12/

XFMR 418 988012 VE/F42
XFMR 418 988015 VE/F42

XFMR 418 988017 VE/F42 /F13
XFMR 418 988018 VE/F42 /F12
XFMR 418 988019 VE/F42 /F14
XFMR 418 988020 VE/F42 /F11
XFMR 418 988021 VE/F42 /F16
XFMR 418 988022 VE/F42 /F18
XFMR 418 988023 VE/F42 /F15
XFMR 418 988024 VE/F42 /F17

E14/ 988073
E09/ 988072
E08/ 988071
F12/ 988070
F11/ 988069
F09/ 988068

INHIBIT DRIVERS

E14 E13 E11 E12 E05 E06

AR 418 988038 VE/F42 E10
AR 418 988039 VE F42 E09
AR 418 988040 VE F42 E04
AR 418 988041 VE F42 E03
AR 418 988042 VE F42 E02
AR 418 988043 VE F42 E01

H BUFF WRITE DRIVER Ø (VWR0) 981
H BUFF WRITE DRIVER 1 (VWR1) 981
H BUFF WRITE DRIVER 2 (VWR2) 982
H BUFF WRITE DRIVER 3 (VWR3) 982
H BUFF WRITE DRIVER 4 (VWR4) 983
H BUFF WRITE DRIVER 5 (VWR5) 983

L ADRS BUFF ROW 13-16 (VR1316A) 984
H ADRS BUFF ROW 13-16 RET (VR1316B) 984
L ADRS BUFF ROW 1-4 (VWR14A) 984
H ADRS BUFF ROW 1-4 RET (VWR14B) 984
L ADRS BUFF ROW 5-8 (VWR58A) 984
H ADRS BUFF ROW 5-8 RET (VWR58B) 984
L ADRS BUFF ROW 9-12 (VWR912A) 984
H ADRS BUFF ROW 9-12 RET (VWR912B) 984

L ADRS BUFF COL 9-12 (VWC912A) 984
H ADRS BUFF COL 9-12 RET (VWC912B) 984
L ADRS BUFF COL 1-4 (VWC14A) 984
H ADRS BUFF COL 1-4 RET (VWC14B) 984
L ADRS BUFF COL 5-8 (VWC58A) 984
H ADRS BUFF COL 5-8 RET (VWC58B) 984
L ADRS BUFF COL 13-16 (VC1316A) 984
H ADRS BUFF COL 13-16 RET (VC1316B) 984

L MEM READ TIMING FF (VT1D) 989
L SELECT RD BUFF (VMSELI) 984
L BUFF CYCLE CONTROL (VMCB) 980
L MEM WRITE TIMING (VT6) 989

H MEM ADRS REG 6 (VMA6) 985
H MEM ADRS REG 7 (VMA7) 985
L MEM ADRS REG 6 (VMA6) 985
L MEM ADRS REG 7 (VMA7) 985
H MEM ADRS REG 2 (VMA2) 985
H MEM ADRS REG 3 (VMA3) 985
L MEM ADRS REG 2 (VMA2) 985
L MEM ADSR REG 3 (VMA3) 985

NOTE:
1. THIS DRAWING IS APPLICABLE ONLY WHEN 80 COLUMN PRE-READ FEATURE IS INCLUDED IN THE CONTROL UNIT.

IDENT NO. 3842988-00

~~FOR MATL REQUIREMENTS SEE L/M, L/M REV LETTER CONTROLS DOCUMENT.~~

COMPANY CONFIDENTIAL INFORMATION
THIS DOCUMENT CONTAINS CONFIDENTIAL INFORMATION OF THE SPERRY RAND CORPORATION. IN CONSIDERATION OF THE RECEIPT OF THIS DOCUMENT, THE RECIPIENT AGREES NOT TO REPRODUCE, COPY, USE OR TRANSMIT THIS DOCUMENT AND/OR THE INFORMATION THEREIN CONTAINED, IN WHOLE OR IN PART, OR TO SUFFER SUCH ACTION BY OTHERS, FOR ANY PURPOSE EXCEPT WITH THE WRITTEN PERMISSION, FIRST OBTAINED, OF SPERRY RAND CORPORATION, AND FURTHER AGREES TO SURRENDER SAME TO SPERRY RAND CORPORATION UPON DEMAND.

| UNLESS OTHERWISE SPECIFIED | | | LAYOUT | DATE |
|---|---|---|---|---|
| DIMENSIONS IN INCHES TOL. ON 2 PLACE DECIMALS ± | 3 PLACE DECIMALS ± | ANGLES ± | H. PORTER | 4-3-67 |
| HOLE DIA. TOL. 0 THRU .250 +.003 −.002 | .251 THRU .500 +.005 −.003 | .501 AND LARGER +.010 −.005 | DRAFTSMAN H. Porter | 4-3-67 |
| THREADS: EXT. CL 2A, INT CL 2B | | | CHECKER M. F. Newberry MS | 5/1/67 |
| COMMODITY CODE | | | ENGINEER T. G. Harrison | 5/1/67 |
| | | | APPROVAL R. P. Cleary | |

DO NOT SCALE THIS PRINT

UNIVAC
DIVISION OF SPERRY RAND CORPORATION

TITLE: MEMORY 2

| SIZE | CODE IDENT. NO. | DWG NO. |
|---|---|---|
| D | | 3842988 |

SCALE | WEIGHT | SHEET 1 OF 1

DWG NO. 3842988

| REVISIONS | | | | | | |
|---|---|---|---|---|---|---|
| ZONE | LTR | EIR | DESCRIPTION — FOR DETAILS SEE EIR | CHK | DATE | APPROVED |
| | - | H13603-TP | RELEASE | MS | 5/1/67 | GJ2 |
| | A | H18669-S | REV INPUT TO COMP 055 | MS | 5/11/67 | R.E.S. |
| | B | C10125-1 | SEE EIR | - | 11/1/67 | |

L STEP THE CLOCK TOGGLE FLOPS (VTOG)

H STEP THE CLOCK TOGGLE FLOPS (VTOGD)

L CLOCK OUPT TP0 (VTP0) 971,980,994

H CLOCK OUPT TP0 (VTP0)

L CLOCK OUPT TP2 (VTP2) 984

H CLOCK OUTP TP2 (VTP2) 980,994

H MEM RD TIMING FF (VTID)

L MEM RD TIMING FF (VTID) 987,988

H CLOCK OUPT TP1 (VTP1) 984

L CLOCK OUPT TP1 (VTP1) 969,971,978,,994

H DLY BUFF RD TIMING FF (VTDD) 972

H CLOCK OUPT TP3 (VTP3)

L CLOCK OUPT TP3 (VTP3) 994,966 978,980,984,986

H CLOCK OUPT TP4 (VTP4)

L CLOCK OUPT TP4 (VTP4) 968,971,972

H CLOCK OUPT TP5 (VTP5)

L CLOCK OUPT TP5 (VTP6) 971,974,978

H CLOCK OUPT TP6 (VTP6) 976

L CLOCK OUPT TP6 (VTP6) 966,971

H CLOCK OUPT TP7 (VTP7) 972,976

L CLOCK OUPT TP7 (VTP7) 994,972,978

H BUFF INHBT TIMING FF (VT56D) 981,982,983

L MEM INHBT TIMING FF (VT56D)

L MEM WRITE TIMING (VT6) 980,987,988

CLOCK OUPT TO (VTO) 985

H BUFF WRITE TIMING (VT6)

MEMORY READ TIMING

MEMORY INHIBIT TIMING

L STEP THE CLOCK TOGGLE FLOPS (VTOG)

H STEP THE CLOCK TOGGLE FLOPS (VTOGD)

VCLRSW 974

DWG NO. 3842989

COMPANY CONFIDENTIAL INFORMATION

THIS DOCUMENT CONTAINS CONFIDENTIAL INFORMATION OF THE SPERRY RAND CORPORATION. IN CONSIDERATION OF THE RECEIPT OF THIS DOCUMENT, THE RECIPIENT AGREES NOT TO REPRODUCE, COPY, USE OR TRANSMIT THIS DOCUMENT AND/OR THE INFORMATION THEREIN CONTAINED, IN WHOLE OR IN PART, OR TO SUFFER SUCH ACTION BY OTHERS, FOR ANY PURPOSE EXCEPT WITH THE WRITTEN PERMISSION, FIRST OBTAINED, OF SPERRY RAND CORPORATION, AND FURTHER AGREES TO SURRENDER SAME TO SPERRY RAND CORPORATION UPON DEMAND.

~~PART NO.~~

IDENT NO. 3842989 - 00

~~FOR MATL REQUIREMENTS SEE L/M. L/M REV LETTER CONTROLS DOCUMENT.~~

| UNLESS OTHERWISE SPECIFIED | | | |
|---|---|---|---|
| DIMENSIONS IN INCHES TOL. ON | | | |
| 2 PLACE DECIMALS | 3 PLACE DECIMALS | ANGLES | |
| + / − | + / − | + / − | |
| HOLE DIA. TOL. | | | |
| 0 THRU .250 | .251 THRU .500 | .501 AND LARGER | |
| + .003 − .002 | + .005 − .003 | + .010 − .005 | |
| THREADS: EXT. CL 2A, INT CL 2B | | | |
| COMMODITY CODE | | | |

| | | |
|---|---|---|
| LAYOUT | VIRGINIA TAWRESEY | 3/28/67 |
| DRAFTSMAN | | 3/28/67 |
| CHECKER | MS | 5/1/67 |
| ENGINEER | | 5/1/67 |
| APPROVAL | | 5/4/67 |
| | | 11/1/67 |

DO NOT SCALE THIS PRINT

UNIVAC
DIVISION OF SPERRY RAND CORPORATION

TITLE: CLOCK

| CLASS | SIZE | CODE IDENT. NO. | DWG NO. |
|---|---|---|---|
| A | D | | 3842989 |

SCALE NONE | WEIGHT | SHEET 1 OF 1

| REVISIONS | | | | | | |
|---|---|---|---|---|---|---|
| ZONE | LTR | EIR | DESCRIPTION – FOR DETAILS SEE EIR | CHK | DATE | APPROVED |
| | - | H20543 -1 | SPECIAL PROD RELEASE | | 2-12-69 | |
| | A | W19488 -01 | REVISED INPUTS TO VC41 ADDED -01 TO TITLE BLOCK | | 12-9 | |

L EDGE NOTCH NO (VEN1N0) 991
L EDGE NOTCH 2N (VEN1L2N) 991
L EDGE NOTCH N2 (VEN1N2) 991

FC S74 090004 VB19

N B76 090003 VB18

A B76 090002 VB18

A B51 090001 VC41

FF B45 090007 VB42 — 090006 VB42 — EDGE NOTCH FF

OR — OR

A B51 090005 VC41

A B51 090006 VC41

H ROW COUNTER 8 FF (VRC8) 977

L ROW COUNTER A FF (VRCA) 977

L SR⇒PUN MAGNETS (VCC3) 976 N MOVE-(6) PRE 8 VALUE (VN13EF1) 977

L CLR; GENERATED MANUALL+SELECTIVE RESET+CHAN CLR (VCLR) 966

H BUS OUT Ø (VOBO) 955

L PUN CON ACCEPTED (VPUNCH) 969

L PAR COR FUNC ON BUS OUT (VEF) 965

L BUS OUT Ø (VOBO) 965

DWG NO. 3839090

IDENT NO. 3839090-00

FOR MATL REQUIREMENTS SEE L/M. L/M REV LETTER CONTROLS DOCUMENT.

COMPANY CONFIDENTIAL INFORMATION
THIS DOCUMENT CONTAINS CONFIDENTIAL INFORMATION OF THE SPERRY RAND CORPORATION. IN CONSIDERATION OF THE RECEIPT OF THIS DOCUMENT, THE RECIPIENT AGREES NOT TO REPRODUCE, COPY, USE OR TRANSMIT THIS DOCUMENT AND/OR THE INFORMATION THEREIN CONTAINED, IN WHOLE OR IN PART, OR TO SUFFER SUCH ACTION BY OTHERS, FOR ANY PURPOSE EXCEPT WITH THE WRITTEN PERMISSION, FIRST OBTAINED, OF SPERRY RAND CORPORATION, AND FURTHER AGREES TO SURRENDER SAME TO SPERRY RAND CORPORATION UPON DEMAND.

UNLESS OTHERWISE SPECIFIED
DIMENSIONS IN INCHES TOL ON 2 PLACE DECIMALS ± — 3 PLACE DECIMALS ± — ANGLES ±
HOLE DIA TOL: 0 THRU .250 ± .003 – .000 — .251 THRU .500 ± .005 – .000 — .501 AND LARGER ± .010 – .005
THREADS EXT. CL 2A, INT CL 2B
COMMODITY CODE

| | | |
|---|---|---|
| LAYOUT | J. P. FLACH | DATE 2-17-69 |
| DRAFTSMAN | T Risvold | 2-17-69 |
| CHECKER | L Mills | 2-12-69 |
| ENGINEER | R Fabis | 2-19-69 |
| APPROVAL | R Fabis | 2-19-69 |
| | W Quick | 2-19-69 |

DO NOT SCALE THIS PRINT

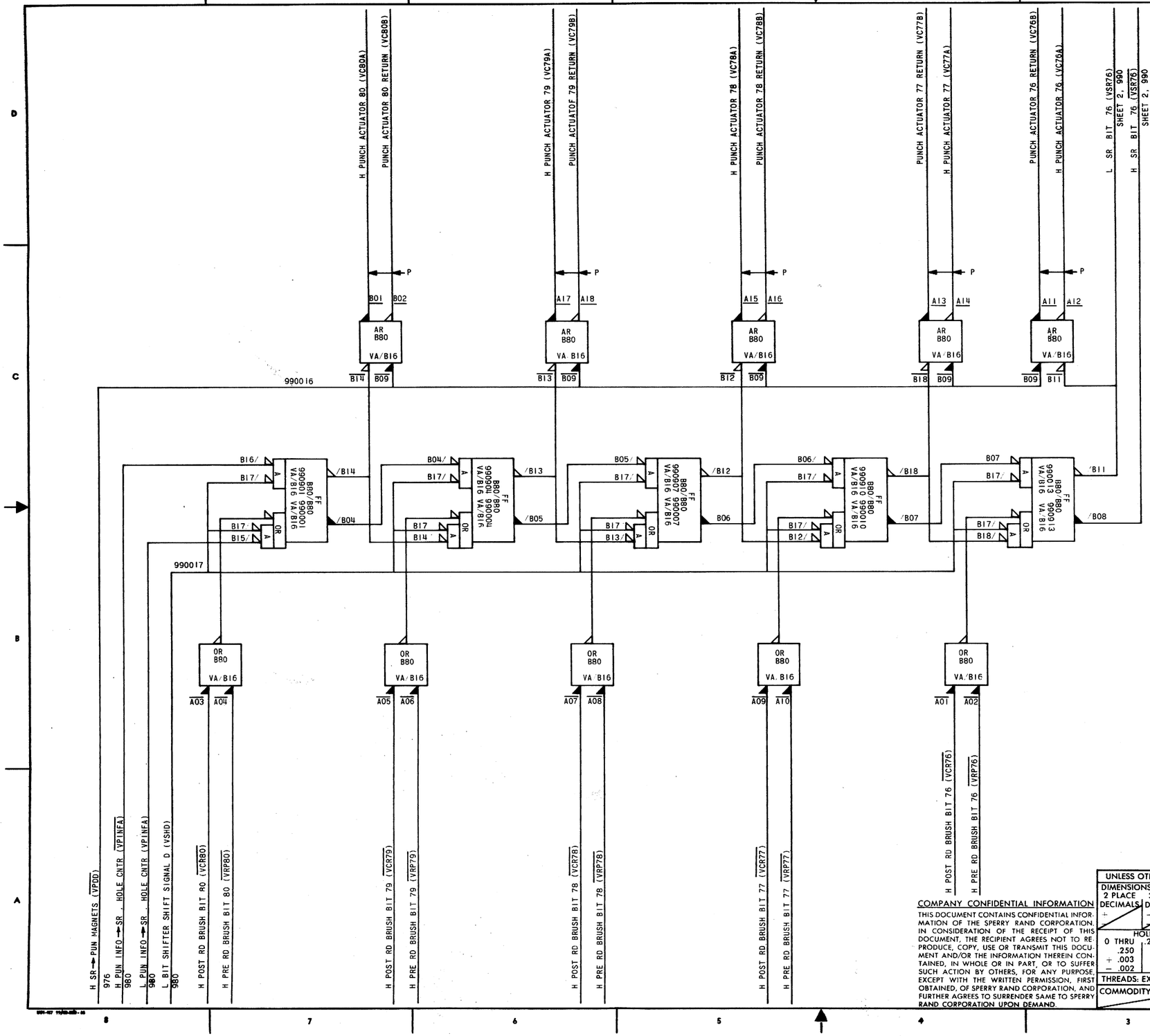
CLASS A — UNIVAC DIVISION OF SPERRY RAND CORPORATION

TITLE
CARD EDGE NOTCH
F-1174-00&-01

SIZE D — CODE IDENT NO. — DWG NO. 3839090

SHEET 1 OF 1

| REVISIONS | | | | | | |
|---|---|---|---|---|---|---|
| ZONE | LTR | EIR | DESCRIPTION — FOR DETAILS SEE EIR | CHK | DATE | APPROVED |
| | - | H18603 -IP | RELEASE | MJ | 5/11/67 | |




NOTES:

1. ALL UNLABLED SOURCES COME FROM BRUSH BLOCKS.
2. ALL UNLABLED DESTINATIONS GO TO ACTUATOR COILS.

| SHEET INDEX | | | |
|---|---|---|---|
| SHEET | SHEET | 1 | 2 |
| | REV. | - | - |


COMPANY CONFIDENTIAL INFORMATION

THIS DOCUMENT CONTAINS CONFIDENTIAL INFORMATION OF THE SPERRY RAND CORPORATION. IN CONSIDERATION OF THE RECEIPT OF THIS DOCUMENT, THE RECIPIENT AGREES NOT TO REPRODUCE, COPY, USE OR TRANSMIT THIS DOCUMENT AND/OR THE INFORMATION THEREIN CONTAINED, IN WHOLE OR IN PART, OR TO SUFFER SUCH ACTION BY OTHERS, FOR ANY PURPOSE, EXCEPT WITH THE WRITTEN PERMISSION, FIRST OBTAINED, OF SPERRY RAND CORPORATION, AND FURTHER AGREES TO SURRENDER SAME TO SPERRY RAND CORPORATION UPON DEMAND.


~~PART NO.~~

IDENT NO. 3842990-00

~~FOR MATL REQUIREMENTS SEE L/M, L/M REV LETTER CONTROLS DOCUMENT.~~

| UNLESS OTHERWISE SPECIFIED | | | |
|---|---|---|---|
| DIMENSIONS IN INCHES TOL. ON 2 PLACE DECIMALS ± | 3 PLACE DECIMALS ± | ANGLES ± | |
| HOLE DIA. TOL. 0 THRU .250 + .003 − .002 | .251 THRU .500 + .005 − .003 | .501 AND LARGER − .010 − .005 | |
| THREADS: EXT. CL 2A, INT CL 2B | | | |
| COMMODITY CODE | | | |

| | | |
|---|---|---|
| LAYOUT | H PORTER | 4-10-67 |
| DRAFTSMAN | H. Porter | 4-10-67 |
| CHECKER | MJ | 5/11/67 |
| ENGINEER | J. F. Harmon | 5/11/67 |
| APPROVAL | A Yardley | 5/11/67 |

DO NOT SCALE THIS PRINT

CLASS A

UNIVAC
DIVISION OF SPERRY RAND CORPORATION

TITLE
READ-PUNCH SHIFT REGISTER COLUMNS 61-80

| SIZE | CODE IDENT. NO. | DWG NO. |
|---|---|---|
| D | | 3842990 |

SCALE | WEIGHT | SHEET 1 OF 2

DWG NO. 3842990

H SR → PUN MAGNETS (VPDD)
976
L SR BIT 76 (VSR76)
SHEET 1
H SR BIT 76 (VSR76)
SHEET 1
L BIT SHIFTER SHIFT SIGNAL D (VSHD)
980

SHIFT REGISTER TYPE B80 VA/B15

B17/ 990025 · B16/ 990024 · B15/ 990021 · B09/ 990023

| | | | |
|---|---|---|---|
| H POST RD BRUSH BIT 75 (VCR75) | A03 | B01 | H PUNCH ACTUATOR 75 (VC75A) |
| H PRE RD BRUSH BIT 75 (VRP75) | A04 | B02 | PUNCH ACTUATOR 75 RETURN (VC75B) |
| H POST RD BRUSH BIT 74 (VCR74) | A05 | A17 | H PUNCH ACTUATOR 74 (VC74A) |
| H PRE RD BRUSH BIT 74 (VRP74) | A06 | A18 | PUNCH ACTUATOR 74 RETURN (VC74B) |
| H POST RD BRUSH BIT 73 (VCR73) | A07 | A15 | H PUNCH ACTUATOR 73 (VC73A) |
| H PRE RD BRUSH BIT 73 (VRP73) | A08 | A16 | PUNCH ACTUATOR 73 RETURN (VC73B) |
| H POST RD BRUSH BIT 72 (VCR72) | A09 | A13 | H PUNCH ACTUATOR 72 (VC72A) |
| H PRE RD BRUSH BIT 72 (VRP72) | A10 | A14 | PUNCH ACTUATOR 72 RETURN (VC72B) |
| H POST RD BRUSH BIT 71 (VCR71) | A01 | A11 | H PUNCH ACTUATOR 71 (VC71A) |
| H PRE RD BRUSH BIT 71 (VRP71) | A02 | A12 | PUNCH ACTUATOR 71 RETURN (VC71B) |

990031 · 990031 /B11 · /B08

SHIFT REGISTER TYPE B80 VA/B14

B17/ 990039 · B16/ 990038 · B15/ 990038 · B09/ 990037

| | | | |
|---|---|---|---|
| H POST RD BRUSH BIT 70 (VCR70) | A03 | B01 | H PUNCH ACTUATOR 70 (VC70A) |
| H PRE RD BRUSH BIT 70 (VRP70) | A04 | B02 | PUNCH ACTUATOR 70 RETURN (VC70B) |
| H POST RD BRUSH BIT 69 (VCR69) | A05 | A17 | H PUNCH ACTUATOR 69 (VC69A) |
| H PRE RD BRUSH BIT 69 (VRP69) | A06 | A18 | PUNCH ACTUATOR 69 RETURN (VC69B) |
| H POST RD BRUSH BIT 68 (VCR68) | A07 | A15 | H PUNCH ACTUATOR 68 (VC68A) |
| H PRE RD BRUSH BIT 68 (VRP68) | A08 | A16 | PUNCH ACTUATOR 68 RETURN (VC68B) |
| H POST RD BRUSH BIT 67 (VCR67) | A09 | A13 | H PUNCH ACTUATOR 67 (VC67A) |
| H PRE RD BRUSH BIT 67 (VRP67) | A10 | A14 | PUNCH ACTUATOR 67 RETURN (VC67B) |
| H POST RD BRUSH BIT 66 (VCR66) | A01 | A11 | H PUNCH ACTUATOR 66 (VC66A) |
| H PRE RD BRUSH BIT 66 (VRP66) | A02 | A12 | PUNCH ACTUATOR 66 RETURN (VC66B) |

990045 · 990045 /B11 · /B08

SHIFT REGISTER TYPE B80 VA/B13

B17/ 990053 · B16 990052 · B15/ 990052 · B09/ 990051

| | | | |
|---|---|---|---|
| H POST RD BRUSH BIT 65 (VCR65) | A03 | B01 | H PUNCH ACTUATOR 65 (VC65A) |
| H PRE RD BRUSH BIT 65 (VRP65) | A04 | B02 | PUNCH ACTUATOR 65 RETURN (VC65B) |
| H POST RD BRUSH BIT 64 (VCR64) | A05 | A17 | H PUNCH ACTUATOR 64 (VC64A) |
| H PRE RD BRUSH BIT 64 (VRP64) | A06 | A18 | PUNCH ACTUATOR 64 RETURN (VC64B) |
| H POST RD BRUSH BIT 63 (VCR63) | A07 | A15 | H PUNCH ACTUATOR 63 (VC63A) |
| H PRE RD BRUSH BIT 63 (VRP63) | A08 | A16 | PUNCH ACTUATOR 63 RETURN (VC63B) |
| H POST RD BRUSH BIT 62 (VCR62) | A09 | A13 | H PUNCH ACTUATOR 62 (VC62A) |
| H PRE RD BRUSH BIT 62 (VRP62) | A10 | A14 | PUNCH ACTUATOR 62 RETURN (VC62B) |
| H POST RD BRUSH BIT 61 (VCR61) | A01 | A11 | H PUNCH ACTUATOR 61 (VC61A) |
| H PRE RD BRUSH BIT 61 (VRP61) | A02 | A12 | PUNCH ACTUATOR 61 RETURN (VC61B) |

990059 · 990059 /B11 · /B08

L SR BIT 61 (VSR61)
991
H SR BIT 61 (VSR61)
991

REVISIONS (CONTROLLING PIC REV LEVEL APPEARS ON THE FIRST SHEET)

| ZONE | LTR | EIR | DESCRIPTION — FOR DETAILS SEE EIR | CHK | DATE | APPROVED |
|---|---|---|---|---|---|---|
| | | | | | | |

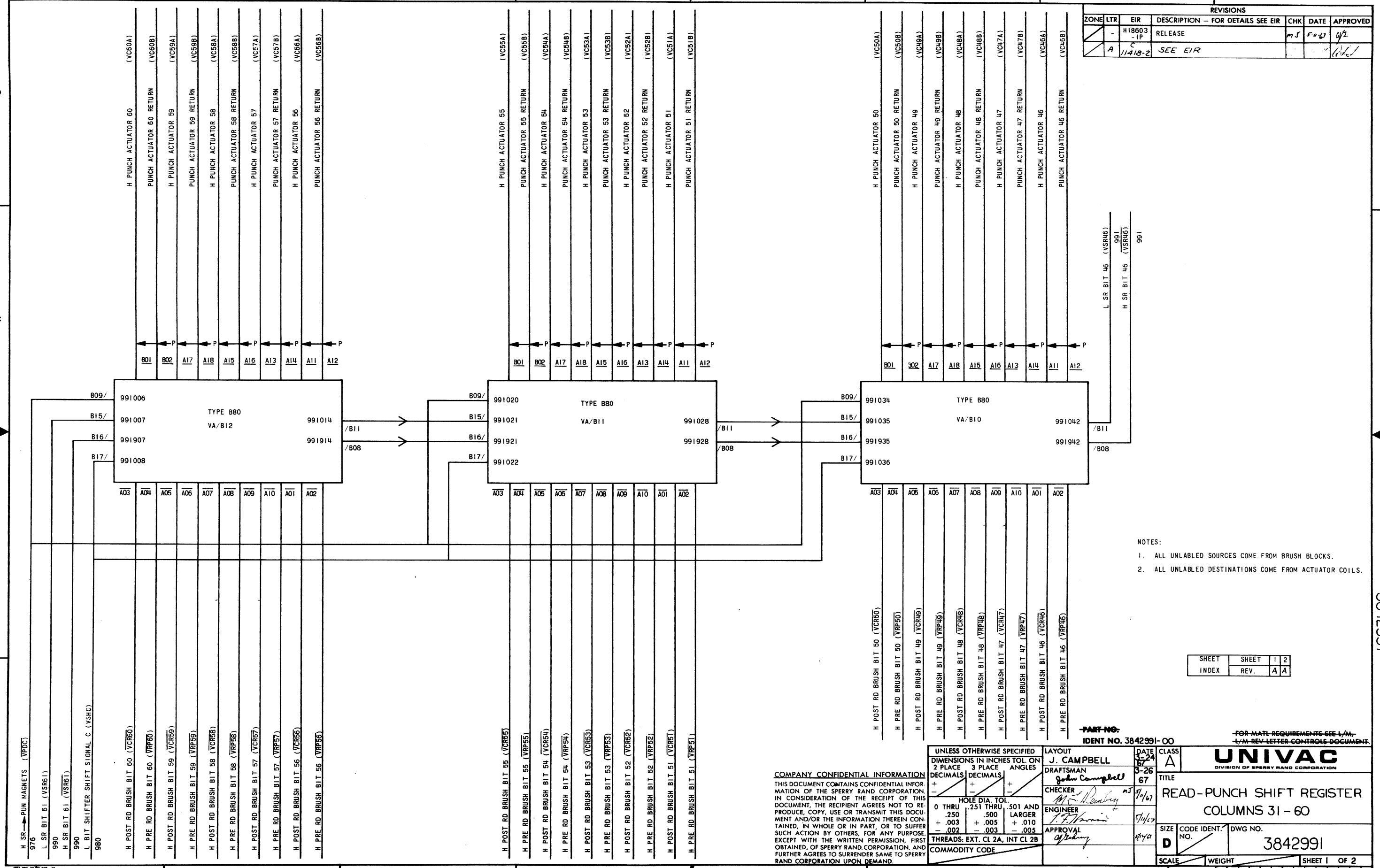
CLASS A
SIZE D
CODE IDENT NO.
DWG NO. 3842990
SCALE
WEIGHT
SHEET 2

UNIVAC
DIVISION OF SPERRY RAND CORPORATION

DO NOT SCALE THIS PRINT

DWG NO. 3842990

| REVISIONS | | | | | | |
|---|---|---|---|---|---|---|
| ZONE | LTR | EIR | DESCRIPTION — FOR DETAILS SEE EIR | CHK | DATE | APPROVED |
| | - | H18603-1P | RELEASE | MS | 5-24-67 | 6/2 |
| | A | C 11418-2 | SEE EIR | | | |




NOTES:

1. ALL UNLABLED SOURCES COME FROM BRUSH BLOCKS.
2. ALL UNLABLED DESTINATIONS COME FROM ACTUATOR COILS.

| SHEET INDEX | SHEET | 1 | 2 |
|---|---|---|---|
| | REV. | A | A |

DWG NO. 3842991

~~PART NO.~~
IDENT NO. 3842991-00

~~FOR MATL REQUIREMENTS SEE L/M, L/M REV LETTER CONTROLS DOCUMENT.~~


COMPANY CONFIDENTIAL INFORMATION

THIS DOCUMENT CONTAINS CONFIDENTIAL INFORMATION OF THE SPERRY RAND CORPORATION. IN CONSIDERATION OF THE RECEIPT OF THIS DOCUMENT, THE RECIPIENT AGREES NOT TO REPRODUCE, COPY, USE OR TRANSMIT THIS DOCUMENT AND/OR THE INFORMATION THEREIN CONTAINED, IN WHOLE OR IN PART, OR TO SUFFER SUCH ACTION BY OTHERS, FOR ANY PURPOSE, EXCEPT WITH THE WRITTEN PERMISSION, FIRST OBTAINED, OF SPERRY RAND CORPORATION, AND FURTHER AGREES TO SURRENDER SAME TO SPERRY RAND CORPORATION UPON DEMAND.


UNLESS OTHERWISE SPECIFIED
DIMENSIONS IN INCHES TOL. ON 2 PLACE DECIMALS ± ; 3 PLACE DECIMALS ± ; ANGLES ±
HOLE DIA. TOL. 0 THRU .250 + .003 − .002 ; .251 THRU .500 + .005 − .003 ; .501 AND LARGER + .010 − .005
THREADS: EXT. CL 2A, INT CL 2B
COMMODITY CODE

| | | |
|---|---|---|
| LAYOUT | J. CAMPBELL | 5-24-67 |
| DRAFTSMAN | John Campbell | 3-26-67 |
| CHECKER | [signature] mJ | 5/1/67 |
| ENGINEER | [signature] | 5/1/67 |
| APPROVAL | [signature] | 5/1/67 |

DO NOT SCALE THIS PRINT

CLASS A

UNIVAC
DIVISION OF SPERRY RAND CORPORATION

TITLE
READ-PUNCH SHIFT REGISTER
COLUMNS 31 - 60

SIZE D | CODE IDENT. NO. | DWG NO. 3842991

SCALE | WEIGHT | SHEET 1 OF 2

- A

| REVISIONS (CONTROLLING PIC REV LEVEL APPEARS ON THE FIRST SHEET) | | | | | | |
|---|---|---|---|---|---|---|
| ZONE | LTR | EIR | DESCRIPTION -- FOR DETAILS SEE EIR | CHK | DATE | APPROVED |
| | A | C 11418-1 | SEE EIR | | | |

H PUNCH ACTUATOR 45 (VCH5A)
PUNCH ACTUATOR 45 RETURN (VCH5B)
H PUNCH ACTUATOR 44 (VCH4A)
PUNCH ACTUATOR 44 RETURN (VCH4B)
H PUNCH ACTUATOR 43 (VCH3A)
PUNCH ACTUATOR 43 RETURN (VCH3B)
H PUNCH ACTUATOR 42 (VCH2A)
PUNCH ACTUATOR 42 RETURN (VCH2B)
H PUNCH ACTUATOR 41 (VCH1A)
PUNCH ACTUATOR 41 RETURN (VCH1B)

CARD EDGE NOTCH FEATURE FI17H-00
L EDGE NOTCH INPUT 42 (VENI 42)
L EDGE NOTCH INPUT 40 (VENI 40)
L EDGE NOTCH INPUT 38 (VENI 38)

H PUNCH ACTUATOR 40 (VCH0A)
PUNCH ACTUATOR 40 RETURN (VCH0B)
H PUNCH ACTUATOR 39 (VC39A)
PUNCH ACTUATOR 39 RETURN (VC39B)
H PUNCH ACTUATOR 38 (VC38A)
PUNCH ACTUATOR 38 RETURN (VC38B)
H PUNCH ACTUATOR 37 (VC37A)
PUNCH ACTUATOR 37 RETURN (VC37B)
H PUNCH ACTUATOR 36 (VC36A)
PUNCH ACTUATOR 36 RETURN (VC36B)

H PUNCH ACTUATOR 35 (VC35A)
PUNCH ACTUATOR 35 RETURN (VC35B)
H PUNCH ACTUATOR 34 (VC34A)
PUNCH ACTUATOR 34 RETURN (VC34B)
H PUNCH ACTUATOR 33 (VC33A)
PUNCH ACTUATOR 33 RETURN (VC33B)
H PUNCH ACTUATOR 32 (VC32A)
PUNCH ACTUATOR 32 RETURN (VC32B)
H PUNCH ACTUATOR 31 (VC31A)
PUNCH ACTUATOR 31 RETURN (VC31B)

L SR BIT 31 (VSR31) 992
H SR BIT 31 (VSR31) 992

P
B01 B02 A17 A18 A15 A16 A13 A14 A11 A12

991067 TYPE B80 VA/B09
991065 991066 TYPE B80 VA B08
TYPE B80 VA/B07

B09/ 991048
B15/ 991049
B16/ 991949
B17/ 991050

991056 /B11
991956 /B08
991070 /B11
991970 /B08
991084 /B11
991984 /B08

A03 A04 A05 A06 A07 A08 A09 A10 A01 A02

H POST RD BRUSH BIT 45 (VCR45)
H PRE RD BRUSH BIT 45 (VRP45)
H POST RD BRUSH BIT 44 (VCR44)
H PRE RD BRUSH BIT 44 (VRP44)
H POST RD BRUSH BIT 43 (VCR43)
H PRE RD BRUSH BIT 43 (VRP43)
H POST RD BRUSH BIT 42 (VCR42)
H PRE RD BRUSH BIT 42 (VRP42)
H POST RD BRUSH BIT 41 (VCR41)
H PRE RD BRUSH BIT 41 (VRP41)

H SR → PUN MAGNETS (VPDC) 976
L SR BIT 46 (VSR46) 991
H SR BIT 46 (VSR46) 991
L BIT SHIFTER SHIFT SIGNAL C (VSHC) 980

H SR → PUN MAGNETS (VPDB) 976
L BIT SHIFTER SHIFT SIGNAL B (VSHB) 980

H POST RD BRUSH BIT 40 (VCR40)
H PRE RD BRUSH BIT 40 (VRP40)
H POST RD BRUSH BIT 39 (VCR39)
H PRE RD BRUSH BIT 39 (VRP39)
H POST RD BRUSH BIT 38 (VCR38)
H PRE RD BRUSH BIT 38 (VRP38)
H POST RD BRUSH BIT 37 (VCR37)
H PRE RD BRUSH BIT 37 (VRP37)
H POST RD BRUSH BIT 36 (VCR36)
H PRE RD BRUSH BIT 36 (VRP36)

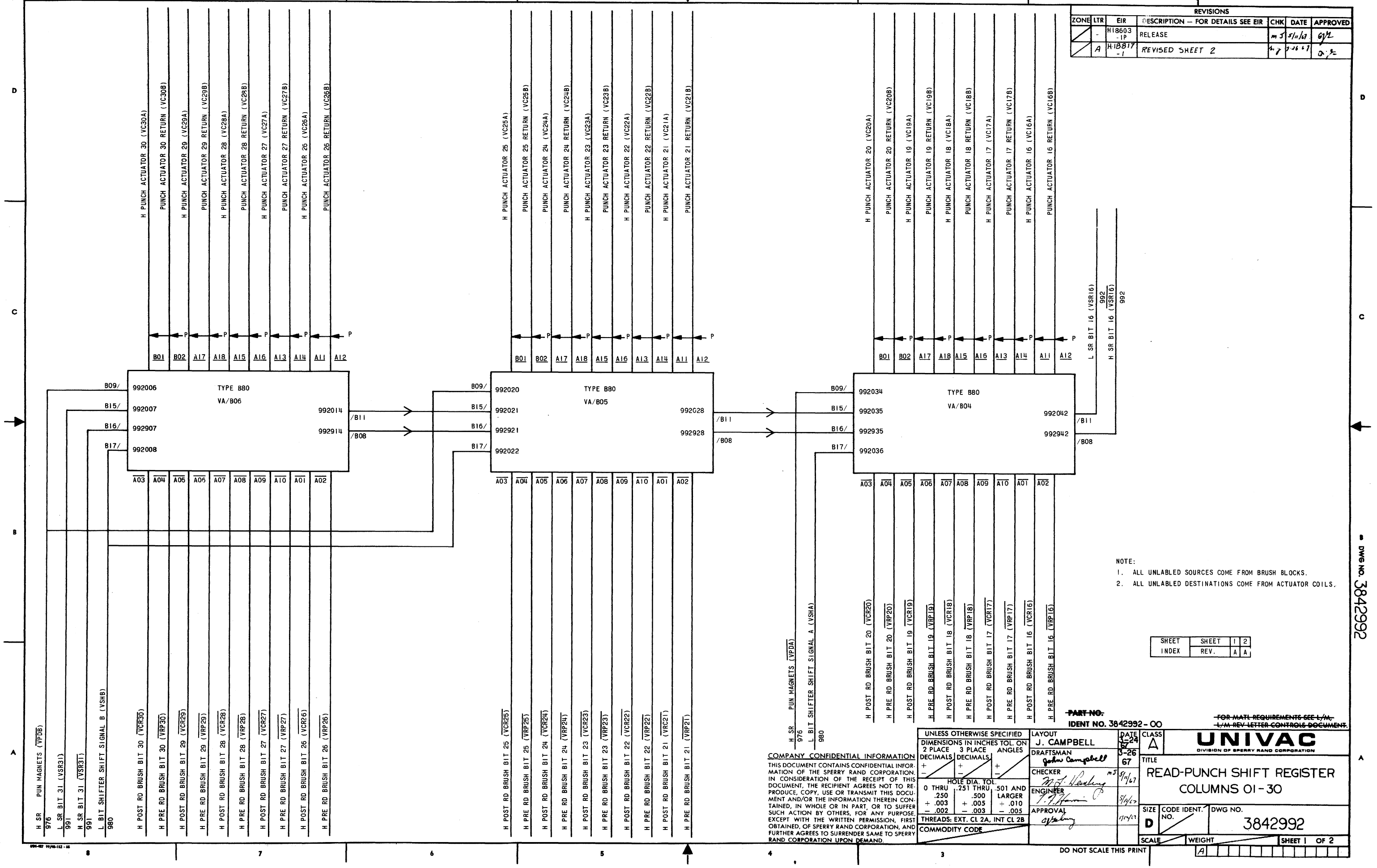
H POST RD BRUSH BIT 35 (VCR35)
H PRE RD BRUSH BIT 35 (VRP35)
H POST RD BRUSH BIT 34 (VCR34)
H PRE RD BRUSH BIT 34 (VRP34)
H POST RD BRUSH BIT 33 (VCR33)
H PRE RD BRUSH BIT 33 (VRP33)
H POST RD BRUSH BIT 32 (VCR32)
H PRE RD BRUSH BIT 32 (VRP32)
H POST RD BRUSH BIT 31 (VCR31)
H PRE RD BRUSH BIT 31 (VRP31)

DO NOT SCALE THIS PRINT

| CLASS | UNIVAC DIVISION OF SPERRY RAND CORPORATION | |
|---|---|---|
| A | | |
| SIZE D | CODE IDENT NO. | DWG NO. 3842991 |
| SCALE | WEIGHT | SHEET 2 |
| | A | |

DWG NO. 3842991

| REVISIONS | | | | | | |
|---|---|---|---|---|---|---|
| ZONE | LTR | EIR | DESCRIPTION — FOR DETAILS SEE EIR | CHK | DATE | APPROVED |
| | - | H18603-IP | RELEASE | mJ | 5/11/67 | GM |
| | A | H-18817-1 | REVISED SHEET 2 | M.F. | 7-26-67 | D.E. |




NOTE:
1. ALL UNLABLED SOURCES COME FROM BRUSH BLOCKS.
2. ALL UNLABLED DESTINATIONS COME FROM ACTUATOR COILS.

| SHEET INDEX | SHEET | 1 | 2 |
|---|---|---|---|
| | REV. | A | A |


COMPANY CONFIDENTIAL INFORMATION

THIS DOCUMENT CONTAINS CONFIDENTIAL INFORMATION OF THE SPERRY RAND CORPORATION. IN CONSIDERATION OF THE RECEIPT OF THIS DOCUMENT, THE RECIPIENT AGREES NOT TO REPRODUCE, COPY, USE OR TRANSMIT THIS DOCUMENT AND/OR THE INFORMATION THEREIN CONTAINED, IN WHOLE OR IN PART, OR TO SUFFER SUCH ACTION BY OTHERS, FOR ANY PURPOSE, EXCEPT WITH THE WRITTEN PERMISSION, FIRST OBTAINED, OF SPERRY RAND CORPORATION, AND FURTHER AGREES TO SURRENDER SAME TO SPERRY RAND CORPORATION UPON DEMAND.


PART NO. ~~PART NO.~~
IDENT NO. 3842992-00

~~FOR MATL REQUIREMENTS SEE L/M. L/M REV LETTER CONTROLS DOCUMENT.~~

UNLESS OTHERWISE SPECIFIED
DIMENSIONS IN INCHES TOL. ON
2 PLACE DECIMALS ± ; 3 PLACE DECIMALS ± ; ANGLES ±
HOLE DIA. TOL.
0 THRU .250 + .003 − .002 ; .251 THRU .500 + .005 − .003 ; .501 AND LARGER + .010 − .005
THREADS: EXT. CL 2A, INT CL 2B
COMMODITY CODE

| | | |
|---|---|---|
| LAYOUT | J. CAMPBELL | 3-24-67 |
| DRAFTSMAN | John Campbell | 3-26-67 |
| CHECKER | mJ | 5/11/67 |
| ENGINEER | | 5/16/67 |
| APPROVAL | | 5/24/67 |

DO NOT SCALE THIS PRINT

CLASS A

UNIVAC
DIVISION OF SPERRY RAND CORPORATION

TITLE
READ-PUNCH SHIFT REGISTER
COLUMNS 01-30

| SIZE | CODE IDENT. NO. | DWG NO. |
|---|---|---|
| D | | 3842992 |

SCALE | WEIGHT | SHEET 1 OF 2

DWG NO. 3842992

| REVISIONS (CONTROLLING PIC REV LEVEL APPEARS ON THE FIRST SHEET) | | | | | | |
|---|---|---|---|---|---|---|
| ZONE | LTR | EIR | DESCRIPTION — FOR DETAILS SEE EIR | CHK | DATE | APPROVED |
| | A | H-18817-1 | REV. INP ON B03949 & B01984 | [illegible] | 7-28-67 | [illegible] |

H PUNCH ACTUATOR 15 (VC15A)
PUNCH ACTUATOR 15 RETURN (VC15B)
H PUNCH ACTUATOR 14 (VC14A)
PUNCH ACTUATOR 14 RETURN (VC14B)
H PUNCH ACTUATOR 13 (VC13A)
PUNCH ACTUATOR 13 RETURN (VC13B)
H PUNCH ACTUATOR 12 (VC12A)
PUNCH ACTUATOR 12 RETURN (VC12B)
H PUNCH ACTUATOR 11 (VC11A)
PUNCH ACTUATOR 11 RETURN (VC11B)

B01 B02 A17 A18 A15 A16 A13 A14 A11 A12

TYPE 880
VA/B03

B09/ 992048
B15/ 992049
B16/ 992949
B17/ 992050

992056 /B11
992956 /B08

A03 A04 A05 A06 A07 A08 A09 A10 A01 A02

H POST RD BRUSH BIT 15 (VCR15)
H PRE RD BRUSH BIT 15 (VRP15)
H POST RD BRUSH BIT 14 (VCR14)
H PRE RD BRUSH BIT 14 (VRP14)
H POST RD BRUSH BIT 13 (VCR13)
H PRE RD BRUSH BIT 13 (VRP13)
H POST RD BRUSH BIT 12 (VCR12)
H PRE RD BRUSH BIT 12 (VRP12)
H POST RD BRUSH BIT 11 (VCR11)
H PRE RD BRUSH BIT 11 (VRP11)

H PUNCH ACTUATOR 10 (VC10A)
PUNCH ACTUATOR 10 RETURN (VC10B)
H PUNCH ACTUATOR 09 (VC09A)
PUNCH ACTUATOR 09 RETURN (VC09B)
H PUNCH ACTUATOR 08 (VC08A)
PUNCH ACTUATOR 08 RETURN (VC08B)
H PUNCH ACTUATOR 07 (VC07A)
PUNCH ACTUATOR 07 RETURN (VC07B)
H PUNCH ACTUATOR 06 (VC06A)
PUNCH ACTUATOR 06 RETURN (VC06B)

B01 B02 A17 A18 A15 A16 A13 A14 A11 A12

TYPE 880
VA/B02

B09/ 992062
B15/ 992063
B16/ 992963
B17 992064

992070 /B11
992970 /B08

A03 A04 A05 A06 A07 A08 A09 A10 A01 A02

H POST RD BRUSH BIT 10 (VCR10)
H PRE RD BRUSH BIT 10 (VRP10)
H POST RD BRUSH BIT 09 (VCR09)
H PRE RD BRUSH BIT 09 (VRP09)
H POST RD BRUSH BIT 08 (VCR08)
H PRE RD BRUSH BIT 08 (VRP08)
H POST RD BRUSH BIT 07 (VCR07)
H PRE RD BRUSH BIT 07 (VRP07)
H POST RD BRUSH BIT 06 (VCR06)
H PRE RD BRUSH BIT 06 (VRP06)

H PUNCH ACTUATOR 05 (VC05A)
PUNCH ACTUATOR 05 RETURN (VC05B)
H PUNCH ACTUATOR 04 (VC04A)
PUNCH ACTUATOR 04 RETURN (VC04B)
H PUNCH ACTUATOR 03 (VC03A)
PUNCH ACTUATOR 03 RETURN (VC03B)
H PUNCH ACTUATOR 02 (VC02A)
PUNCH ACTUATOR 02 RETURN (VC02B)
H PUNCH ACTUATOR 01 (VC01A)
PUNCH ACTUATOR 01 RETURN (VC01B)

B01 B02 A17 A18 A15 A16 A13 A14 A11 A12

TYPE 880
VA/B01

B09 992076
B15 992077
B16 992977
B17 992078

992084 /B11
992984 /B08

A03 A04 A05 A06 A07 A08 A09 A10 A01 A02

H POST RD BRUSH BIT 05 (VCR05)
H PRE RD BRUSH BIT 05 (VRP05)
H POST RD BRUSH BIT 04 (VCR04)
H PRE RD BRUSH BIT 04 (VRP04)
H POST RD BRUSH BIT 03 (VCR03)
H PRE RD BRUSH BIT 03 (VRP03)
H POST RD BRUSH BIT 02 (VCR02)
H PRE RD BRUSH BIT 02 (VRP02)
H POST RD BRUSH BIT 01 (VCR01)
H PRE RD BRUSH BIT 01 (VRP01)

L SR OUPT RD INFO (VSR01)
H SR OUPT RD INFO (VSR01)
980

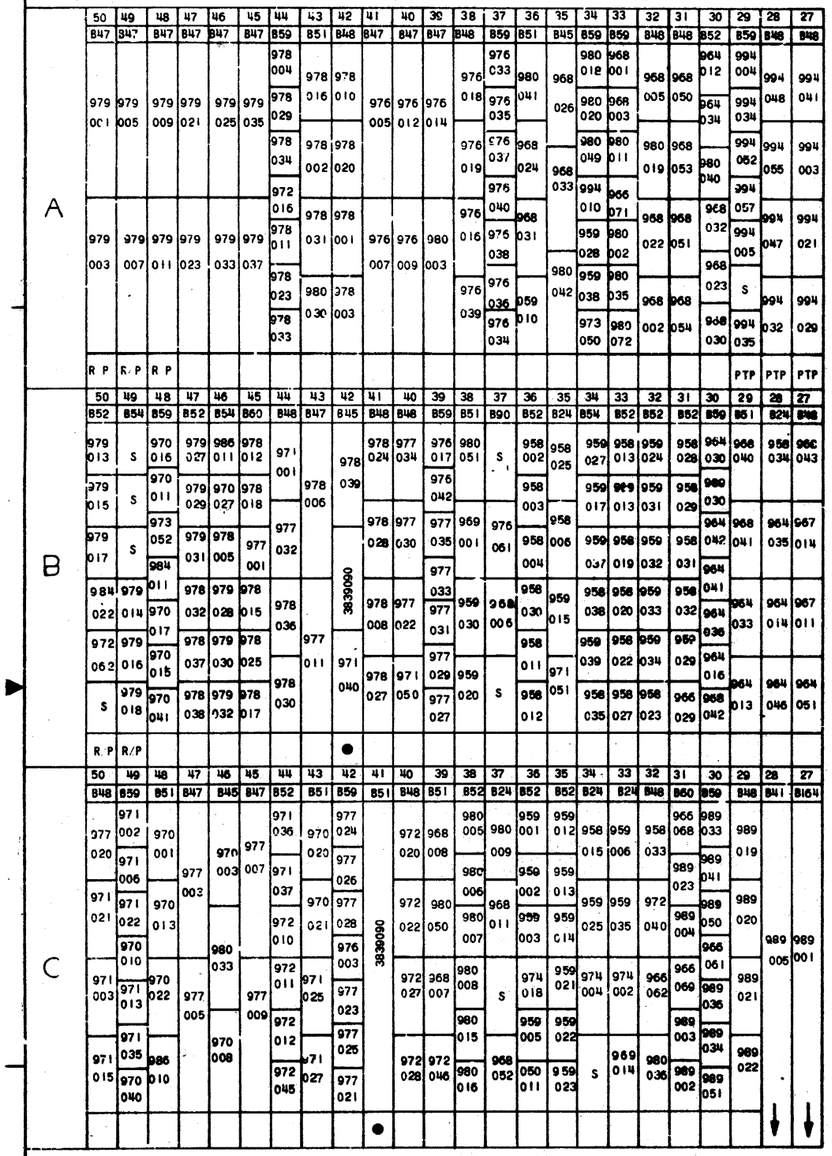
H SR PUN MAGNETS (VPDA) 976
L SR BIT 16 (VSR16) 992
H SR BIT 16 (VSR16) 992
L BIT SHIFTER SHIFT SIGNAL A (VSHA) 980

B DWG NO. 3842992

| CLASS | UNIVAC DIVISION OF SPERRY RAND CORPORATION | |
|---|---|---|
| A | | |
| SIZE | CODE IDENT NO. | DWG NO. |
| D | | 3842992 |
| SCALE | WEIGHT | SHEET 2 |
| | A | |

DO NOT SCALE THIS PRINT

9R9-467 C 11/65-132 - 66




| REVISIONS | | | | | | |
|---|---|---|---|---|---|---|
| ZONE | LTR | EIR | DESCRIPTION – FOR DETAILS SEE EIR | CHK | DATE | APPROVED |
| | - | H-18603-1P | RELEASE | MJS | 5-11-67 | |
| | A | H-18817-1 | CHANGED CARD IN C24 | | | |
| | B | H-19601 | SEE EIR | | | |
| | C | C10262-1 | SEE EIR | | | |
| | D | C10125-1 | SEE EIR | | | |
| | E | 11418-2 | SEE EIR | | | |
| | F | 15886-1 | SEE EIR | | | |
| | G | 25870 | DELETED POSITION C37 CKT 3 | | | |

| SPARE CIRCUITS | | | |
|---|---|---|---|
| CARD TYPE | POSITION ROW | POSITION COL | CIRCUIT |
| B24 | C | 34 | 4 |
| | | 37 | 3 |
| | E | 45 | 3 |
| B45 | C | 01 | 3 |
| | | 22 | 3 |
| B48 | D | 35 | 3 |
| B51 | | 8 | 4 |
| | | 9 | 4 |
| B52 | B | 17 | 6 |
| | | 50 | 6 |
| B54 | B | 49 | 1,2,3 |
| B59 | A | 29 | 6 |
| | D | 23 | 7 |
| | E | 47 | 2&3 |
| | F | 4 | 7 |
| B69 | E | 15 | 3 |
| | | 16 | 3 |
| | | 17 | 3 |
| | | 18 | 3 |
| | F | 17 | 3 |
| | | 18 | 3 |
| | | 19 | 3 |
| B76 | C | 3 | 3 |
| | | 4 | 4 |
| | | 17 | 2 |
| B90 | B | 37 | 1&4 |

| SHEET INDEX | SHEET | 1 2 |
|---|---|---|
| | REV. | G G |

DWG NO. 3842993

IDENT NO. 3842993-00


COMPANY CONFIDENTIAL INFORMATION

THIS DOCUMENT CONTAINS CONFIDENTIAL INFORMATION OF THE SPERRY RAND CORPORATION. IN CONSIDERATION OF THE RECEIPT OF THIS DOCUMENT, THE RECIPIENT AGREES NOT TO REPRODUCE, COPY, USE OR TRANSMIT THIS DOCUMENT AND/OR THE INFORMATION THEREIN CONTAINED, IN WHOLE OR IN PART, OR TO SUFFER SUCH ACTION BY OTHERS, FOR ANY PURPOSE EXCEPT WITH THE WRITTEN PERMISSION, FIRST OBTAINED, OF SPERRY RAND CORPORATION, AND FURTHER AGREES TO SURRENDER SAME TO SPERRY RAND CORPORATION.


| UNLESS OTHERWISE SPECIFIED | | | LAYOUT | DATE |
|---|---|---|---|---|
| DIMENSIONS IN INCHES TOL. ON 2 PLACE DECIMALS ± | 3 PLACE DECIMALS ± | ANGLES ± | H. PORTER | 10-67 |
| | | | DRAFTSMAN M. Porter | 11-67 |
| HOLE DIA. TOL. 0 THRU .250 + .003 − .002 | .251 THRU .500 + .005 − .002 | .501 AND LARGER + .010 − .005 | CHECKER M. L. Hawley MJS | 11/9/67 |
| THREADS. EXT. CL 3A, INT CL 2B | | | ENGINEER | 5/26/67 |
| COMMODITY CODE | | | APPROVAL | 5/26/67 |

DO NOT SCALE THIS PRINT

CLASS A — UNIVAC, DIVISION OF SPERRY RAND CORPORATION

TITLE: MODULE V CARD PLACEMENT CHART "ROW PUNCH"

SIZE D | CODE IDENT NO. | DWG NO. 3842993

SCALE | WEIGHT | SHEET 1 OF 2

ABCDEFG

| REVISIONS (CONTROLLING PIC REV LEVEL APPEARS ON THE FIRST SHEET) | | | | | |
|---|---|---|---|---|---|
| ZONE | LTR | EIR | DESCRIPTION — FOR DETAILS SEE EIR | CHK | DATE | APPROVED |
| | A | H-18817-1 | REV LOCATIONS D24, D9, E9, 10, 11, 12, 13, D & E 1, 2, 3 & 4 | [illegible] | 7-28-67 | [illegible] |
| | B | H19601-6 | SEE EIR | [illegible] | 2-4-68 | [illegible] |
| | C | C10852-1 | SEE EIR | [illegible] | 6/6/68 | [illegible] |
| | E | 11418-2 | SEE EIR | [illegible] | 6/5/69 | [illegible] |
| | F | 15886-1 | SEE EIR | [illegible] | 4/5/76 | [illegible] |
| | G | 23470-1 | ADDED POSITION E26 CKT 7 | [illegible] | 3/16/77 | [illegible] |

NOTE:

1. * INDICATES ASSEMBLIES USED FOR OLD I/O INTERFACE.

   ▲ INDICATES ASSEMBLIES USED FOR REVISED I/O INTERFACE.

2. ● INDICATES CIRCUITS AND CARD LOCATION USED FOR CARD EDGE NOTCH FEATURE F1174-00.

DWG NO. 3842993

| | | | |
|---|---|---|---|
| CLASS A | UNIVAC DIVISION OF SPERRY RAND CORPORATION | | |
| SIZE D | CODE IDENT NO. | DWG NO. 3842993 | |
| SCALE | WEIGHT | SHEET 2 | |

DO NOT SCALE THIS PRINT

| REVISIONS | | | | | | |
|---|---|---|---|---|---|---|
| ZONE | LTR | EIR | DESCRIPTION – FOR DETAILS SEE EIR | CHK | DATE | APPROVED |
| | - | H18603 :1P | RELEASE | MJ | 5/4/67 | [illegible] |

H PTP RUN MOTOR RELAY ON (VTMRL) 975
H PTP DATA LATE (VPTLATE) 968
H FEED TAPE (VPFED) 975
L FEED PAPER TAPE (VPFED) 995
H PTP END OVCE END (VPTEND) 968
H CLR THE "D" REG (VPTCLD) 972
H CLR THE "B" REG (VPTCLB) 972
H DATA REG FF (VNEED) 971
H HOLE COUNT ERR (VUNEX) 978

AR B76 994013 VA20
OR B52 994012 VB17
FF B59 B207 994010 994011 VA34 VA17
DF 8103 994008 994009 VA18
DF 8103 994006 994007 VA19
(10 SEC) MOTOR STOP DELAY
MOTOR START DELAY
(2 SEC)
40uF 35V
OR B59 994004 VA29
N B59 994005 VA29
A B52 994017 VB17
A B103 994018 VA18
A B103 994016 VA18
FF 8103 994020 994019 VA18
A B48 994021 VA27
DF B207 994027 VA17 (4.5ms)
A B48 994029 VA27
AR B76 994030 VA20
N B59 994031 VB20
A B48 994032 VA28
A B59 994033 VB20
N B59 994035 VA29
OR B59 994034 VA29
FF B59 B59 994051 994050 VB20 VB20
A B48 994047 VA28
FF B103 994045 994046 VA19
A B103 994043 VA19
A B103 994042 VA19
FF B48 B59 994041 994040 VA27 VB20
A B59 994052 VA29
A B59 994057 VA29
A B48 994058 VA28
A B48 994055 VA28
N B59 994054 VB20
N B76 994053 VC17
N B76 994001 VA20
A B76 994002 VA20
A B48 994003 VA27
N B59 994015 VB20
N B207 994025 VA17
N B107 994024 VA17

H PTP PUN MOTOR SW ON (VTMST) 975
L OFF LINE FF (VOFLF) 974
L LOAD BUFF COM HAS BEEN ACCEPTED (VLBUF) 969
L INST EXECUTION INITIATED (VINSTR) 968
L PAPER TAPE SELECTED (VPTSEL) 964
L DATA REQ FF (VNEED) 971
H PTP PUN SPT (VPSPR) 975
H CLOCK OUPT TP 2 (VTP2) 989
L TERM DATA TRANS (NORMAL+PAR ERR+INTERFACE DISCONNECT (VTERM) 970
H INST EXECUTION INITIATED (VINSTR) 968
H DVCE END (VDVEND) 968
RESET; GENERATED MANUALLY+SELECTIVE CHAN CLR (VCLR) 966
L CLOCK OUPT TP 3 (VTP3) 989
L CLOCK OUPT TP 1 (VTP1) 989
L CLOCK OUPT TP 7 (VTP7) 989
L CLOCK OUPT TP 0 (VPTO) 989
L TAPE LOW ON PTP PUN (VPTLOW) 975


COMPANY CONFIDENTIAL INFORMATION

THIS DOCUMENT CONTAINS CONFIDENTIAL INFORMATION OF THE SPERRY RAND CORPORATION. IN CONSIDERATION OF THE RECEIPT OF THIS DOCUMENT, THE RECIPIENT AGREES NOT TO REPRODUCE, COPY, USE OR TRANSMIT THIS DOCUMENT AND/OR THE INFORMATION THEREIN CONTAINED, IN WHOLE OR IN PART, OR TO SUFFER SUCH ACTION BY OTHERS, FOR ANY PURPOSE, EXCEPT WITH THE WRITTEN PERMISSION, FIRST OBTAINED, OF SPERRY RAND CORPORATION, AND FURTHER AGREES TO SURRENDER SAME TO SPERRY RAND CORPORATION UPON DEMAND.


UNLESS OTHERWISE SPECIFIED
DIMENSIONS IN INCHES TOL. ON 2 PLACE DECIMALS ± , 3 PLACE DECIMALS ± , ANGLES ±
HOLE DIA. TOL: 0 THRU .250 + .003 − .002 ; .251 THRU .500 ± .005 − .003 ; .501 AND LARGER ± .010 − .005
THREADS: EXT. CL 2A, INT CL 2B
COMMODITY CODE

| LAYOUT | DATE |
|---|---|
| VIRGINIA TAWRESEY | 4/7/67 |
| DRAFTSMAN | 4/7/67 |
| CHECKER MJ | 5/1/67 |
| ENGINEER | 5/1/67 |
| APPROVAL | 5/14/67 |

DO NOT SCALE THIS PRINT

PART NO.
IDENT NO. 3842994-00
FOR MATL REQUIREMENTS SEE L/M, L/M REV LETTER CONTROLS DOCUMENT

CLASS A

UNIVAC
DIVISION OF SPERRY RAND CORPORATION

TITLE
PAPER TAPE PUNCH CONTROL

SIZE D | CODE IDENT. NO. | DWG NO. 3842994
SCALE NONE | WEIGHT | SHEET 1 OF 1

B DWG NO. 3842994 A

UDI-587 11/65-152 - 66

| REVISIONS | | | | | | |
|---|---|---|---|---|---|---|
| ZONE | LTR | EIR | DESCRIPTION — FOR DETAILS SEE EIR | CHK | DATE | APPROVED |
| | | | | | | |

H INPUT → CHAN 8 ACTR (VP80) 978
H INPUT → CHAN 7 ACTR (VP87) 975
H INPUT → CHAN 6 ACTR (VP86) 978
H INPUT → CHAN 5 ACTR (VP85) 978
H INPUT → CHAN 4 ACTR (VP84) 978
H INPUT → CHAN 3 ACTR (VP83) 978
H INPUT → CHAN 2 ACTR (VP82) 975
H INPUT → CHAN 1 ACTR (VP81) 975

02 — AR B76 995002 VA21 — 01 — 08 — A B76 995001 VA21 — 14 15 16
18 — AR B76 995004 VA21 — 12 — 03 — A B76 995003 VA21 — 05 06
02 — AR B76 995006 VA22 — 01 — 08 — A B76 995005 VA22 — 14 15 16
18 — AR B76 995008 VA22 — 12 — 03 — A B76 995007 VA22 — 05 06
02 — AR B76 995010 VA23 — 01 — 08 — A B76 995009 VA23 — 14 15 16
18 — AR B76 995012 VA23 — 12 — 03 — A B76 995011 VA23 — 05 06
02 — AR B76 995014 VA24 — 01 — 08 — A B76 995013 VA24 — 14 15 16
18 — AR B76 995016 VA24 — 12 — 03 — A B76 995015 VA24 — 05 06

L B DATA REG 0 (VB0) 981
L FEED PAPER TAPE (VPFED) 994
L B DATA REG 1 (VB1) 981
L "D" REG 0 (VD0) 981
L "D" REG 1 (VD1) 981
L "D" REG 2 (VD2) 982
L "D" REG 3 (VD3) 982
L "D" REG 4 (VD4) 983
L "D" REG 5 (VD5) 983

COMPANY CONFIDENTIAL INFORMATION
THIS DOCUMENT CONTAINS CONFIDENTIAL INFORMATION OF THE SPERRY RAND CORPORATION. IN CONSIDERATION OF THE RECEIPT OF THIS DOCUMENT, THE RECIPIENT AGREES NOT TO REPRODUCE, COPY, USE OR TRANSMIT THIS DOCUMENT AND/OR THE INFORMATION THEREIN CONTAINED, IN WHOLE OR IN PART, OR TO SUFFER SUCH ACTION BY OTHERS, FOR ANY PURPOSE, EXCEPT WITH THE WRITTEN PERMISSION, FIRST OBTAINED, OF SPERRY RAND CORPORATION, AND FURTHER AGREES TO SURRENDER SAME TO SPERRY RAND CORPORATION UPON DEMAND.

UNLESS OTHERWISE SPECIFIED
DIMENSIONS IN INCHES TOL. ON
2 PLACE DECIMALS ± / 3 PLACE DECIMALS ± / ANGLES ±
HOLE DIA. TOL.
0 THRU .250 + .003 − .002 / .251 THRU .500 + .005 − .003 / .501 AND LARGER + .010 − .005
THREADS: EXT. CL 2A, INT CL 2B
COMMODITY CODE

| | | |
|---|---|---|
| LAYOUT | VIRGINIA TAWRESEY | |
| DRAFTSMAN | | 3/14/67 |
| CHECKER | | 3/14/67 |
| ENGINEER | | 5/4/67 |
| APPROVAL | | 5/14/67 |

~~PART NO.~~ IDENT NO. 3842995 - 00
~~FOR MATL REQUIREMENTS SEE L/M, T/M REV LETTER CONTROLS DOCUMENT.~~

DO NOT SCALE THIS PRINT

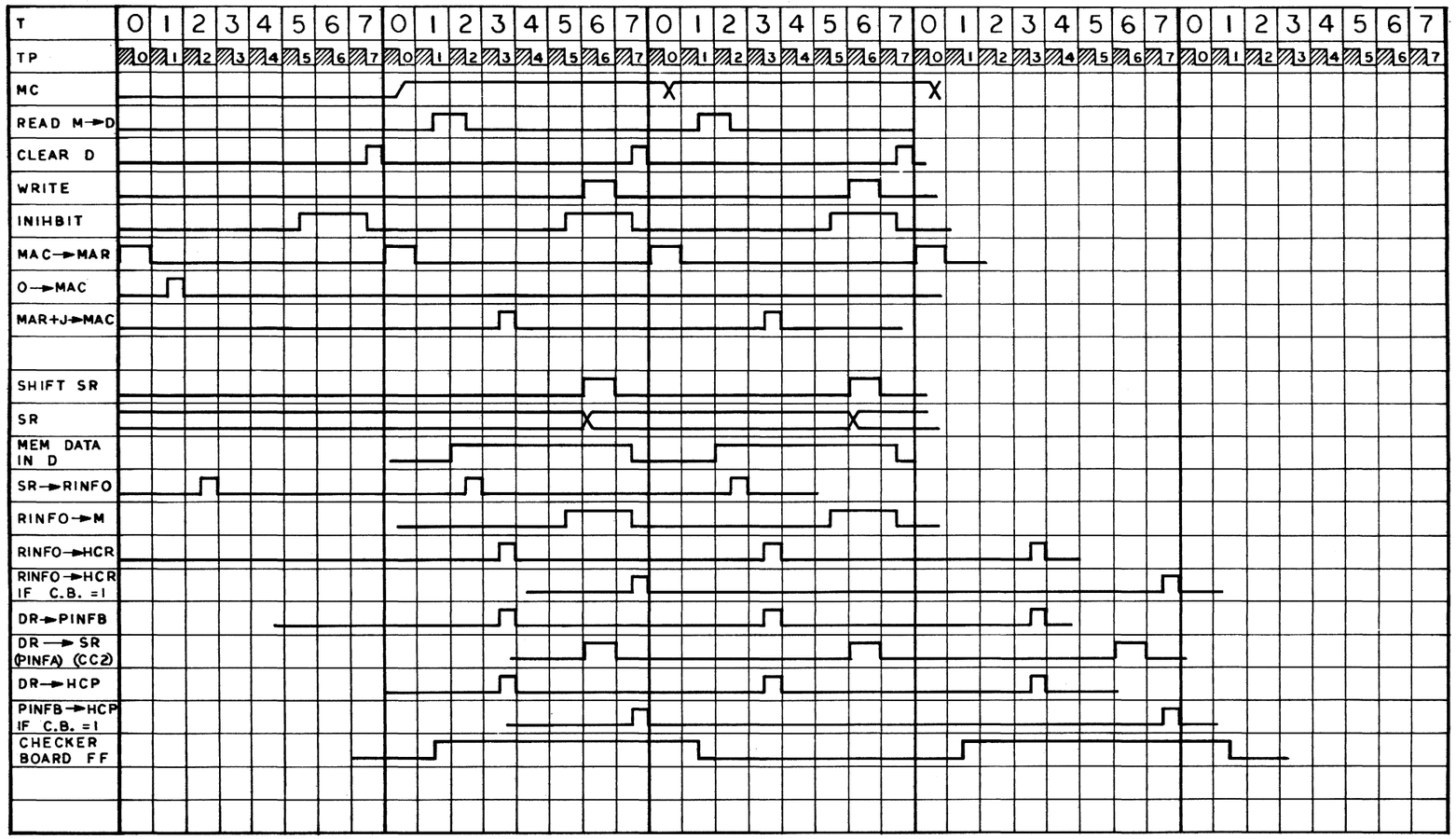
CLASS A
UNIVAC
DIVISION OF SPERRY RAND CORPORATION

TITLE
PAPER TAPE PUNCH DATA

SIZE D | CODE IDENT. NO. | DWG NO. 3842995
SCALE NONE | WEIGHT | SHEET 1 OF 1

DWG NO. 3842995

| REVISIONS | | | | | | |
|---|---|---|---|---|---|---|
| ZONE | LTR | EIR | DESCRIPTION – FOR DETAILS SEE EIR | CHK | DATE | APPROVED |
| | – | HIB603 -3 | RELEASE IDENT -00 | | 5-26-67 | W.C.L. |




COMPANY CONFIDENTIAL INFORMATION

THIS DOCUMENT CONTAINS CONFIDENTIAL INFORMATION OF THE SPERRY RAND CORPORATION. IN CONSIDERATION OF THE RECEIPT OF THIS DOCUMENT, THE RECIPIENT AGREES NOT TO REPRODUCE, COPY, USE OR TRANSMIT THIS DOCUMENT AND/OR THE INFORMATION THEREIN CONTAINED, IN WHOLE OR IN PART, OR TO SUFFER SUCH ACTION BY OTHERS, FOR ANY PURPOSE EXCEPT WITH THE WRITTEN PERMISSION, FIRST OBTAINED, OF SPERRY RAND CORPORATION, AND FURTHER AGREES TO SURRENDER SAME TO SPERRY RAND CORPORATION UPON DEMAND.

UNLESS OTHERWISE SPECIFIED
DIMENSIONS IN INCHES TOL. ON 2 PLACE DECIMALS ± / 3 PLACE DECIMALS ± / ANGLES ± /
HOLE DIA. TOL. 0 THRU .250 + .003 – .002 / .251 THRU .500 + .005 – .003 / .501 AND LARGER + .010 – .005
THREADS: EXT. CL 2A, INT CL 2B
COMMODITY CODE

| | | |
|---|---|---|
| LAYOUT | J. Morris | 5-26-67 |
| DRAFTSMAN | R. Snow | 5-9-67 |
| CHECKER | [illegible] | 5-27-67 |
| ENGINEER | W.E. Steidle | 6-8-67 |
| APPROVAL | W.E. Steidle | 6-8-67 |
| | J.A. [illegible] | 6/13/67 |
| | H.J. Hayman | |

~~PART NO.~~
IDENT NO. 3842996-00

FOR MATL REQUIREMENTS SEE L/M, L/M REV LETTER CONTROLS DOCUMENT.

CLASS A

UNIVAC
DIVISION OF SPERRY RAND CORPORATION

TITLE
TIMING CHART- SHIFT CYCLES MEMORY AND HOLE COUNT

SIZE D | CODE IDENT. NO. | DWG NO. 3842996

SCALE | WEIGHT | SHEET 1 OF 1

DO NOT SCALE THIS PRINT

DWG NO. 3842996

UDL-877 09/65-1R2-68

| REVISIONS | | | | | | |
|---|---|---|---|---|---|---|
| SYM | ZONE | EIR | DESCRIPTION | CHK | DATE | APPROVED |
| — | | H8603-3 | RELEASE IDENT – 00 | | 5-29-67 | W.E.S. |

1.5° PER DIVISION

214.2° 238.2° 262.2° 286.2° 310.2° 334.2° 358.2° 22.2° 46.2° 70.2° 94.2° 118.2° 142.2° 166.2° 190.2° 214.2

CYCLE POINT

10 11 12 13 14 15 1 2 3 4 5 6 7 8 9

SPROCKET TRACK

CLUTCH SPROCKET

READ PROBE 2

READ PROBE 1

CYCLE START

PUNCH

1 2 CC3 4 5 1 2 CC3 4 5 1 2 CC3 4 5 1 2 CC3 4 5 1 2 CC3 4 5 1 2 CC3 4 5 1 2 CC3 4 5 1 2 CC3 4 5 1 2 CC3 4 5 1 2 CC3 4 5 1 2 CC3 4 5 1 2 CC3 4 5 1 2 CC3 4 5 1 2 CC3 4 5

ROW 10 — L.E. AT PCA (233°)

ROW 11 — SKEW CHECK

ROW 12 — L.E. AT STACKER DEFLECTOR

ROW 13

ROW 14

ROW 15

ROW 9-1

ROW 9

ROW 8

ROW 7 — SKEW CHECK

ROW 6 — L.E. AT PCB (90°)

ROW 5 — SKEW CHECK

ROW 4

ROW 3 — T.E. AT PCA (185°)

ROW 2

ROW 1 — SKEW CHECK

FEED F/F

CLUTCH

RUN F/F

TE AT PCB (59°)

DATA TO BUFF (HCR1+1)

(CLR HCR2)

(HC→ERR)

(HCW→HCP)

(HCR1→HCW)

(HCP→HCR2)

(CLR HCP)

(CLR HCR1)

DATA FROM BUFF (HCP+1) (HCR2-1)

ERROR SELECT

PROGRAM SELECT

CHECK ERROR F/F

STACKER SELECT F/F

VPEP

PUNCH ORDER F/F

JAM F/FS

VROW 412

VLF

ONL (ON LINE)

ONL

ONL

DWG NO. 3842997

DO NOT SCALE
FOR TIMING.
THIS DWG. FOR
REFERENCE ONLY

| QTY REQD | FIND | REF DES | CODE IDENT | DWG SIZE | PART OR IDENTIFYING NO. | NOMENCLATURE OR DESCRIPTION |
|---|---|---|---|---|---|---|

LIST OF MATERIAL

~~PART NO.~~

IDENT. NO. 3842997-00

THIS DOCUMENT CONTAINS CONFIDENTIAL INFORMATION OF THE UNIVAC DIVISION OF SPERRY RAND CORPORATION AND IS FURNISHED PURSUANT TO THE FOLLOWING INSTRUMENT:

ON THE UNDERSTANDING THAT THIS DOCUMENT AND THE INFORMATION THEREON MAY NOT BE DEALT WITH IN ANY MANNER EXCEPT FOR THE PURPOSES OF THAT INSTRUMENT OR AS OTHERWISE PERMITTED IN WRITING BY THE UNIVAC DIVISION OF SPERRY RAND CORPORATION.

NEXT ASSY | EQUIPMENT

APPLICATION

COMMODITY CODE

UNLESS OTHERWISE SPECIFIED
DIMENSIONS IN INCHES. TOLERANCE ON
2 PLACE DECIMALS ± | 3 PLACE DECIMALS ± | ANGLES ±

HOLE DIAMETER TOLERANCE

| 0 THRU .250 | .251 THRU .500 | 501 & LARGER |
|---|---|---|
| +.003 −.002 | +.005 −.003 | +.010 −.005 |

THREADS: EXT CL 2A, INT CL 2B

MATERIAL

FINISH

| | | |
|---|---|---|
| LAYOUT | J. Morris | 5-24-67 |
| DRAFTSMAN | G. Snow | 5-25-67 |
| CHECKER | | 5-29-67 |
| ENGINEER | W.E. Stiehl | 6-8-67 |
| APPROVAL | W.E. Stiehl | 6-8-67 |
| | J.A. Fanning | 6/13/67 |

CLASS A

UNIVAC
DIVISION OF SPERRY RAND CORPORATION

TITLE TIMING CHART – PUNCH LOGIC CARD CYCLE AND ROW TIMING 200 CPM

CODE IDENT NO.

SIZE D

DWG NO. 3842997

SCALE

WEIGHT

SHEET OF

DO NOT SCALE THIS PRINT

| REVISIONS | | | | | | |
|---|---|---|---|---|---|---|
| SYM | ZONE | EIR | DESCRIPTION | CHK | DATE | APPROVED |
| — | | HI8603-3 | RELEASE IDENT – 00 | | 5-29-67 | W.E.S. |

1.5° PER DIVISION

211.2° 235.2° 259.2° 283.2° 307.2° 331.2° 355.2° 19.2° 43.2° 67.2° 91.2° 115.2° 142.2° 163.2° 187.2° 211.2°

CYCLE POINT 10 11 12 13 14 15 1 2 3 4 5 6 7 8 9

SPROCKET TRACK

CLUTCH SPROCKET — READ PROBE 2 — READ PROBE 1 — PUNCH — CYCLE START

1 2 CC3 4 5 1 2 CC3 4 5 1 2 CC3 4 5 1 2 CC3 4 5 1 2 CC3 4 5 1 2 CC3 4 5 1 2 CC3 4 5 1 2 CC3 4 5 1 2 CC3 4 5 1 2 CC3 4 5 1 2 CC3 4 5 1 2 CC3 4 5 1 2 CC3 4 5

ROW 10 — L.E. AT PCA (233°)
ROW 11 — SKEW CHECK
ROW 12
ROW 13 — L.E. AT STACKER DEFLECTOR
ROW 14
ROW 15
ROW 9-1
ROW 9
ROW 8
ROW 7 — SKEW CHECK
ROW 6 — L.E. AT PCB (90°)
ROW 5 — SKEW CHECK
ROW 4
ROW 3
ROW 2 — T.E. AT PCA (185°)
ROW 1 — SKEW CHECK

FEED F/F
CLUTCH
RUN F/F
(CLR HCR1)
TE AT PCB (59°)

DATA TO BUFF (HCR1+1)
(CLR HCR2)
(HC→ERR) (HCW→HCP) (HCR1→HCW) (HCP→HCR2) (CLR HCP)
DATA FROM BUFF (HCP+1) (HCR2-1)
ERROR SELECT
PROGRAM SELECT
CHECK ERROR F/F
STACKER SELECT F/F

VPEP
PUNCH ORDER F/F

JAM F/FS

ONL (ON LINE)
VROW 412
VLF
ONL

DWG NO 3842998

DO NOT SCALE
FOR TIMING.
THIS DWG. FOR
REFERENCE ONLY

| QTY REQD | FIND | REF DES | CODE IDENT | DWG SIZE | PART OR IDENTIFYING NO. | NOMENCLATURE OR DESCRIPTION |
|---|---|---|---|---|---|---|

LIST OF MATERIAL

~~PART NO.~~
IDENT. NO. 3842998-00

THIS DOCUMENT CONTAINS CONFIDENTIAL INFORMATION OF THE UNIVAC DIVISION OF SPERRY RAND CORPORATION AND IS FURNISHED PURSUANT TO THE FOLLOWING INSTRUMENT:

ON THE UNDERSTANDING THAT THIS DOCUMENT AND THE INFORMATION THEREON MAY NOT BE DEALT WITH IN ANY MANNER EXCEPT FOR THE PURPOSES OF THAT INSTRUMENT OR AS OTHERWISE PERMITTED IN WRITING BY THE UNIVAC DIVISION OF SPERRY RAND CORPORATION.

NEXT ASSY | EQUIPMENT
APPLICATION
COMMODITY CODE

UNLESS OTHERWISE SPECIFIED
DIMENSIONS IN INCHES. TOLERANCE ON 2 PLACE DECIMALS ±, 3 PLACE DECIMALS ±, ANGLES ±
HOLE DIAMETER TOLERANCE
0 THRU .250 +.003 −.002 | .251 THRU .500 +.005 −.003 | .501 & LARGER +.010 −.005
THREADS: EXT CL 2A, INT CL 2B
MATERIAL
FINISH

| | | DATE |
|---|---|---|
| LAYOUT | J. Morris | 5-24-67 |
| DRAFTSMAN | G. Snow | 5-25-67 |
| CHECKER | | 5-29-67 |
| ENGINEER | W.E. Stehl | 6-8-67 |
| APPROVAL | W.E. Stehl | 6-7-67 |
| | J.A. Comito | 6/13/67 |
| | H.J. Hawke | |

CLASS A

UNIVAC
DIVISION OF SPERRY RAND CORPORATION

TITLE TIMING CHART-PUNCH LOGIC CARD CYCLE AND ROW. TIMING 250 CPM

CODE IDENT NO. | SIZE D | DWG NO. 3842998

SCALE | WEIGHT | SHEET | OF

DO NOT SCALE THIS PRINT

USB-1710

# SERVICING DIAGRAM SECTION INDEX

INDEX TITLE: REFERENCE DRAWINGS

INDEX NUMBER — BASIC TYPE NO: 0604 — INDEX VAR. NO.: 2

INDEX VAR. REV.: B — SHEET 1 OF 2

TYPE NO. VARIATION USAGE

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 00 | | | | | | | | |
| 01 | | | | | | | | |

| L/M | SHEET | DOCUMENT NUMBER | TITLE | DOCUMENT REVISION LEVEL 1 2 3 4 5 6 7 8 9 10 |
|---|---|---|---|---|
| - | 1 | 3006160 | L.V. Power Supply | A A A A A A A A A C |
| - | 2 | 3006160 | " " " | A A A A A A A A A B |
| X | - | 3615597 | Comp. Assy Termination HSB | - - A A A A A A A A |
| - | - | 3615597 | " " " " | - - - - - - - - - - |
| X | - | 3615608 | Control Panel Wired | B B B B B B B B B B |
| - | 1 | 3615608 | " " " | A A A A A A A A A A |
| - | 2 | 3615608 | " " " | - - - - - - - - - - |
| X | - | 3615618 | Panel Assy Relay Wired | A A A A B C D D D D |
| - | 1 | 3615618 | " " " " | A A A A B C C C C C |
| - | 2 | 3615618 | " " " " | A A A A B C C C C C |
| - | 3 | 3615618 | " " " " | C C C C C |
| - | 4 | 3615618 | " " " " | C C C C C |
| X | - | 3615623 | Interface Control Assembly | D F G H J K P T T W |
| - | 1 | 3615623 | " " " | C F G H J K P T T U |
| - | 2 | 3615623 | " " " | - - - - - K N T T T |
| - | 3 | 3615623 | " " " | - - - - - - M M M M |
| - | 4 | 3615623 | " " " | - D D D J J J S S U |
| - | 5 | 3615623 | " " " | - F G H H H H H H H |
| - | 6 | 3615623 | " " " | - - - - - - - R R R |
| - | 7 | 3615623 | " " " | A A A H H H H S S S |
| - | 8 | 3615623 | " " " | C F F F F K K R R R |
| - | 9 | 3615623 | " " " | C F F F J K K K K K |
| - | 10 | 3615623 | " " " | - - - - - - - - - - |
| - | 11 | 3615623 | " " " | - - - - - - - - - - |
| - | 12 | 3615623 | " " " | - - - - - - - R R R |
| - | 13 | 3615623 | " " " | - - - - - - - - - - |
| - | 14 | 3615623 | " " " | - - - - - - - - - - |
| - | 15 | 3615623 | " " " | - - - - - - - - - - |

APPROVALS

| FED | DATE | MFG. ENG. | DATE | DESIGN ENG. | DATE |
|---|---|---|---|---|---|
| | | | | | |

UD4 - 5086 RI

# SERVICING DIAGRAM SECTION INDEX

INDEX TITLE: REFERENCE DRAWINGS

INDEX NUMBER — BASIC TYPE NO: 0604 — INDEX VAR. NO.: 2

INDEX VAR. REV.: B — SHEET 2 OF 2

TYPE NO. VARIATION USAGE

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 00 | | | | | | | | |
| 01 | | | | | | | | |

| L/M | SHEET | DOCUMENT NUMBER | TITLE | DOCUMENT REVISION LEVEL 1 2 3 4 5 6 7 8 9 10 |
|---|---|---|---|---|
| - | 1 | 5028981 | Schematic Row Punch 80 Col. | - - - A |
| - | 2 | 5028981 | " " " " " | - - - - |
| - | 3 | 5028981 | " " " " " | - - - - |
| - | 4 | 5028981 | " " " " " | - - - A |
| - | 5 | 5028981 | " " " " " | - - - A |
| - | 1 | 3837899 | Schematic Row Punch | A B D D E F F F F G |
| - | 2 | 3837899 | " " " | - - C C C C C C C C |
| - | 3 | 3837899 | " " " | - - C C E F F F F F |
| - | 4 | 3837899 | " " " | A B D D E E E E E G |
| - | 5 | 3837899 | " " " | A B D D E E E E E G |
| X | - | 5016950 | Distribution Box | B B B B B B B B D D |
| - | - | 5016950 | " " | A A A A A A A A D D |
| X | - | 5018174 | Power Supply 60 Cycle | E E E E E E E E E F |
| - | - | 5018174 | " " " " | E E E E E E E E E F |
| - | - | 3617566 | Card Edge Notch Feature (F1174 | A A A |

APPROVALS

| FED | DATE | MFG. ENG. | DATE | DESIGN ENG. | DATE |
|---|---|---|---|---|---|
| | | | | | |

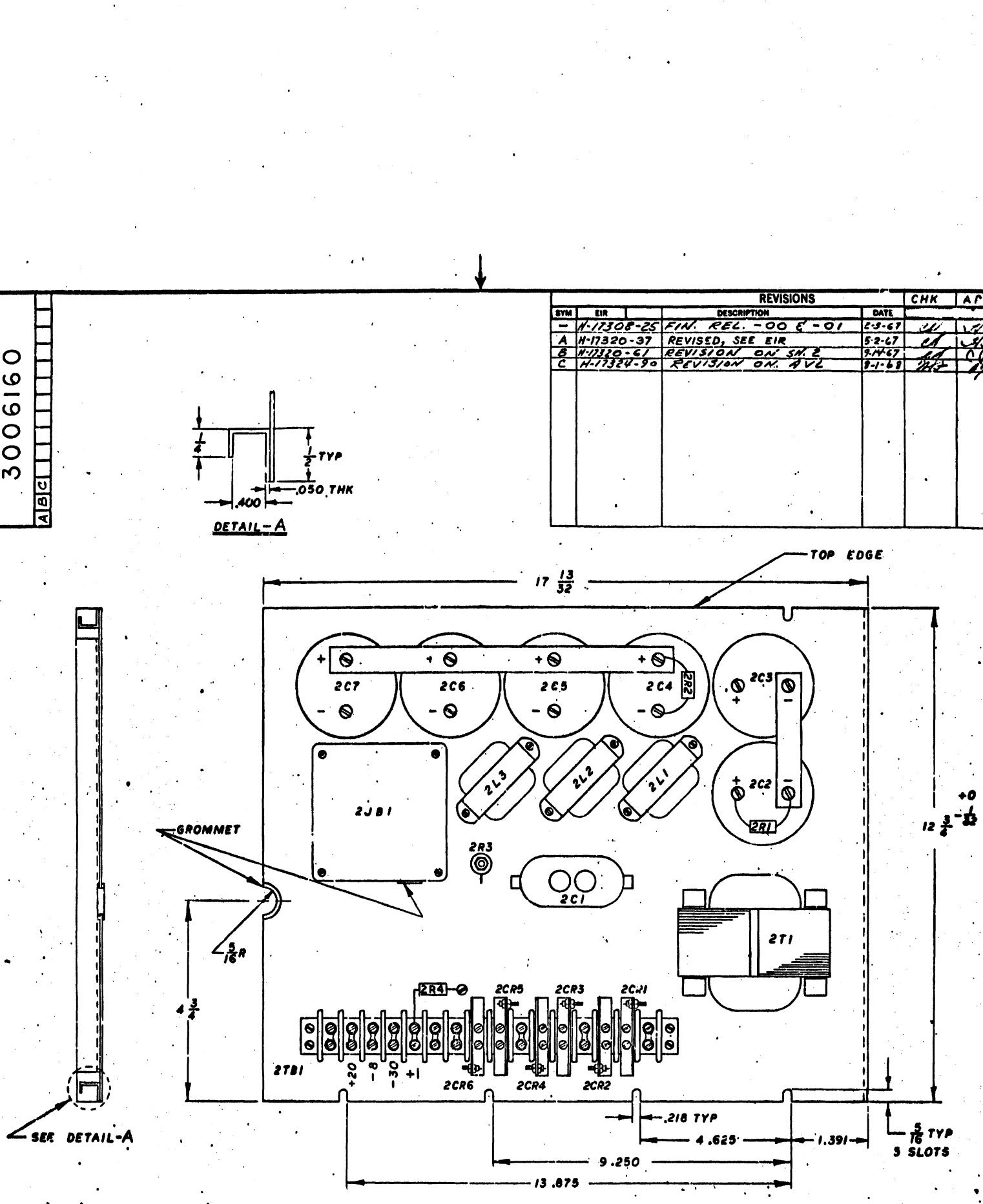
UD4 - 5086 RI

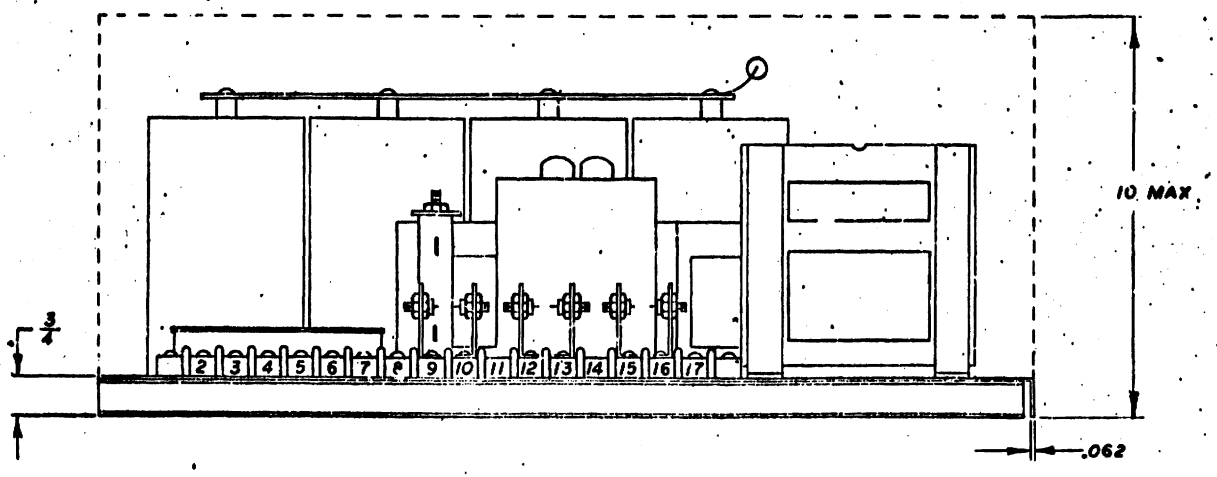
DWG. NO. 3006160 A B C

| REVISIONS | | | | CHK | APP'D |
|---|---|---|---|---|---|
| SYM | EIR | DESCRIPTION | DATE | | |
| – | H-17308-25 | FIN. REL. -00 & -01 | 2-3-67 | | |
| A | H-17320-37 | REVISED, SEE EIR | 5-2-67 | | |
| B | H-17320-61 | REVISION ON SH. 2 | 9-14-67 | | |
| C | H-17328-90 | REVISION ON. ADL | 9-1-68 | | |




DETAIL-A




| | | | | | | | |
|---|---|---|---|---|---|---|---|
| SHEET | REV | C | B | | | | |
| INDEX | SH | 1 | 2 | – | | | |

UNLESS OTHERWISE SPECIFIED
ALL DIMENSIONS IN INCHES
TOLERANCE ON FRACTIONS ± 1/32 | DECIMALS ± | ANGLES ±

| | | |
|---|---|---|
| COMPONENT ENGINEERING | R. J. Hincenbergh | 1/24/67 |
| DESIGN ENGINEER | E. Cunningham | 1/26/67 |
| QUALITY | | |
| STANDARDS | | |
| | | |
| | | WEIGHT |

CLASS A

UNIVAC
DIVISION OF SPERRY RAND CORPORATION
PURCHASED PART DRAWING

TYPE SPECIFICATION CONTROL

TITLE
# POWER SUPPLY

| CODE IDENT NO. | SIZE | DWG NO. |
|---|---|---|
| 94209 | C | 3006160 |

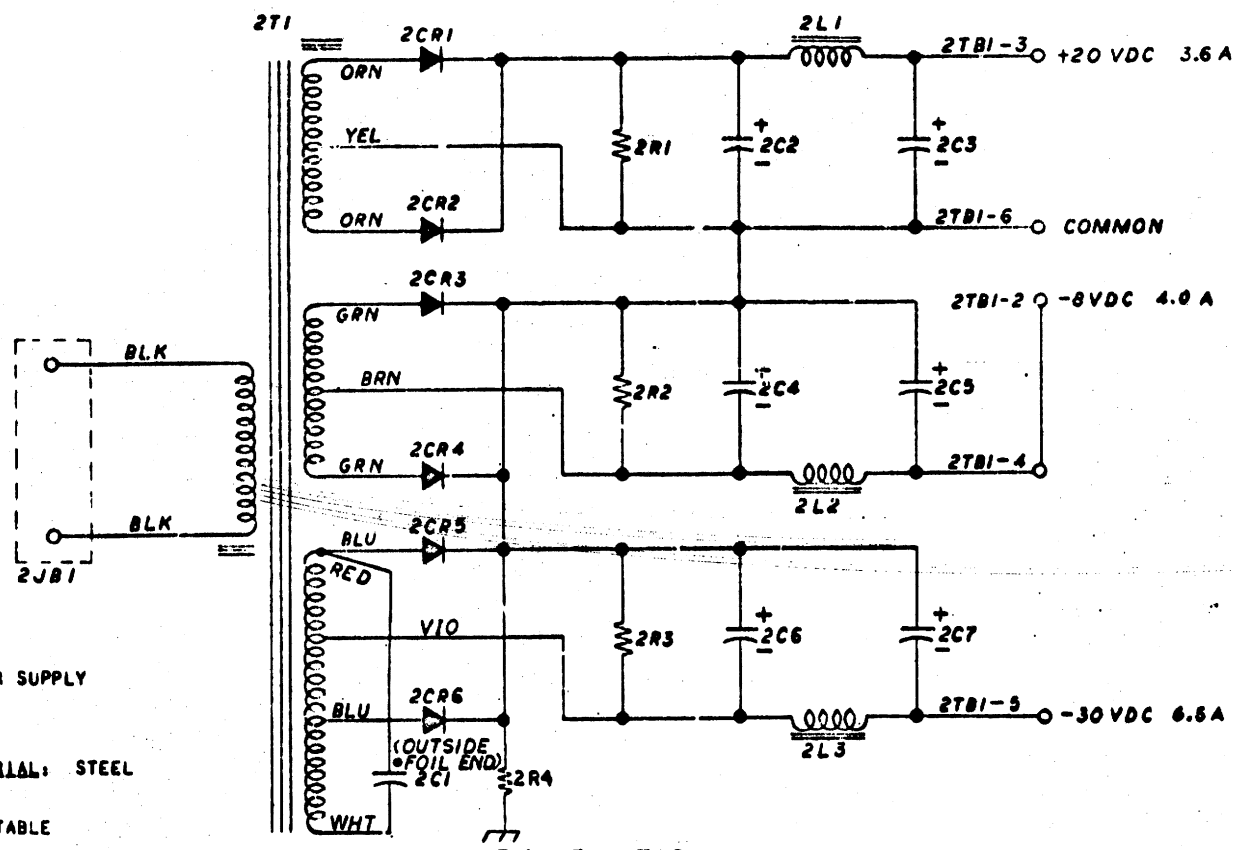
CATALOG CODE 6130101

SHEET 1 OF 2

A B C

DWG. NO. 3006160 AB

| REVISIONS | | | | CHK. | APP'D. |
|---|---|---|---|---|---|
| SYM | EIR | DESCRIPTION | DATE | | |
| – | H-17305-25 | FIN. REL. -00 & -01 | 3-3-67 | | |
| A | H-17320-37 | REVISED, SEE EIR | 5-2-67 | | |
| B | H-17320-67 | SEE EIR | 9-14-67 | | |




SCHEMATIC

REQUIREMENTS:

GENERAL: POWER SUPPLY

PHYSICAL:

TYPE: D.C.

CHASSIS MATERIAL: STEEL

ELECTRICAL:

INPUT: SEE TABLE

OUTPUT:

| VOLTAGE (VOLTS) | CURRENT (AMPS) | REGULATION (± %) |
|---|---|---|
| -30 | 6.5 | 3 |
| +20 | 3.6 | 3 |
| -8 | 4.0 | 3 |

| UNIVAC PART NO. | INPUT VOLTAGE (VOLTS ± 15%) | FREQUENCY ( HZ ) |
|---|---|---|
| 3006160-00 | 230 | 60 ± 1/2 |
| -01 | 220 | 50 ± 1/2 |

NOTES:

(1) ALL COMPONENTS TO BE MOUNTED ON TOP SIDE OF PANEL, AND THEY MUST NOT PROTRUDE BEYOND EDGES.

(2) ALL CAPACITORS ARE TO BE MOUNTED WITH SPADE LUG TYPE BRACKETS SIMILAR TO UNIVAC PARTS 5016940 AND 5016941 OR APPROVED EQUIVALENT.

(3) SPOT WELD RAILS EVERY 2 1/2 INCHES.

(4) NO HARDWARE PROTRUSIONS ALLOWED ON BOTTOM SIDE OF PANEL WITHIN 3/4 INCH ALONG TOP EDGE AND 1 INCH ALONG OTHER THREE EDGES.

APPLICABLE SPECIFICATIONS:

CS-1957 (60 HERTZ-PURCHASE AND INSPECTION)*

CS-1983 (50 HERTZ-PURCHASE AND INSPECTION)

SH-03033 (POWER SUPPLY-GENERAL SPECIFICATION- IN THE EVENT OF ANY CONFLICT BETWEEN SH-03033 AND THE PURCHASE AND INSPECTION SPECIFICATION, THE LATTER SHALL GOVERN.)

SH-03727 (TEST SPECIFICATION)

* EXCEPT FOR OUTPUT CURRENTS WHICH SHALL BE AS SPECIFIED ABOVE.

NOTES (CONT'D):

(5) WITH RESISTOR 2R4 DISCONNECTED, THE POLARITY OF WIRING TO CAPACITOR 2C1 MUST BE SUCH THAT A MINIMUM A.C. POTENTIAL APPEARS FROM THE CHASSIS TO THE D.C. RETURN. THIS VOLTAGE SHOULD BE MEASURED WITH AN OSCILLOSCOPE OR OTHER HIGH IMPEDANCE DEVICE.

UNIVAC PAR NO.: SEE TABLE

| REF. DES. | UNIVAC PART NO. | DESCRIPTION |
|---|---|---|
| 2R4 | 3010734-17 | RESISTOR, FIXED, WIREWOUND - 100Ω, 5% |
| 2TB1 | 73340016 | TERMINAL BOARD |
| 2CR1-2CR6 | 3005166-03 | SEMICONDUCTOR DEVICE, DIODE |
| 2C6, 2C7 | 3005264-39 | CAPACITOR, FIXED, ELECTROLYTIC-30,000μFD. 40VDC |
| 2C4, 2C5 | 3005264-00 | CAPACITOR, FIXED, ELECTROLYTIC-90,000μFD, 10VDC |
| 2C2, 2C3 | 3005264-38 | CAPACITOR, FIXED, ELECTROLYTIC-25,000μFD, 25VDC |
| 2C1 | 3005206-02 | CAPACITOR, FIXED, PAPER DIELECTRIC-6μFD, 660VAC |
| 2R3 | 2495039-01 | RESISTOR, FIXED, WIREWOUND-100Ω, 25% |
| 2R2 | 3010734-15 | RESISTOR, FIXED, WIREWOUND-50Ω, 5% |
| 2R1 | 3010734-20 | RESISTOR, FIXED, WIREWOUND-200Ω, 5% |
| 2L1-2L3 | 3006418-00 | REACTOR |
| 2T1 (50HZ) | 3006417-01 | TRANSFORMER, POWER, STEP-DOWN |
| 2T1 (60HZ) | 3006417-00 | TRANSFORMER, POWER, STEP-DOWN |

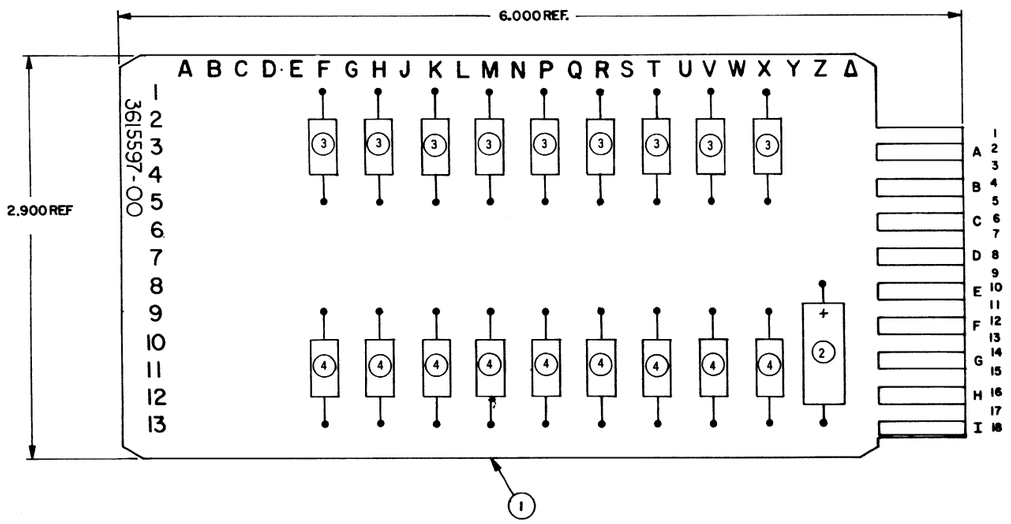
REPLACEMENT PARTS LIST

| | | | |
|---|---|---|---|
| COMPONENT ENGINEERING | DATE 1/24/67 | CLASS A | UNIVAC |
| DESIGN ENGINEER | 1/24/67 | | PURCHASED PART DRAWING |
| QUALITY | | TYPE SPECIFICATION CONTROL | |
| | | TITLE POWER SUPPLY | |
| | | CODE IDENT NO. 94209 | SIZE C |
| | | CATALOG CODE 6130100 | DWG NO. 3006160 |
| | WEIGHT | | SHEET 2 OF 2 |

UNLESS OTHERWISE SPECIFIED
ALL DIMENSIONS IN INCHES
TOLERANCE ON FRACTIONS ± DECIMALS ± ANGLES ±

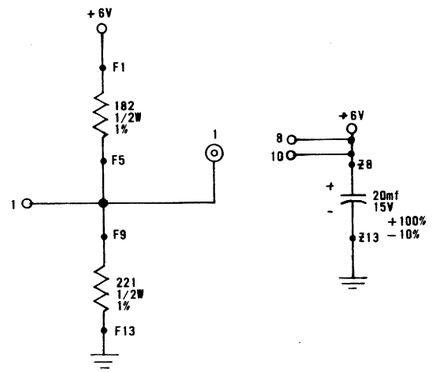
AB

| REVISIONS | | | | | | |
|---|---|---|---|---|---|---|
| ZONE | LTR | EIR | DESCRIPTION — FOR DETAILS SEE EIR | CHK | DATE | APPROVED |
| | — | H17582-10 | RELEASE PT-00 | | 9-9-67 | |




## NOTES:

1. STRIPE ON DIODE BODY DENOTES CATHODE END.
   ◯ INDICATES FIND NO.
   <> INDICATES DESIGNATIONS STAMPED ON COMPONENT FOR REF. ONLY.
   ( ) INDICATES DESIGNATIONS FOR REF. ONLY & SHALL NOT BE STAMPED.
2. UNLESS OTHERWISE DESIGNATED
   - CONTACT A SHALL BE ⏚
   - CONTACT B SHALL BE SPARE
   - CONTACT C SHALL BE → −8V
   - CONTACT D & E SHALL BE → −30V
   - CONTACT F SHALL BE → −20V
   - CONTACT G SHALL BE → +20V
   - CONTACT H SHALL BE SPARE
   - CONTACT I SHALL BE ⏚
3. MINIMUM SPACE FOR THIS BOARD IS .500 INCH
4. ASSEMBLE PER (S01)
5. TEST PER (S02) & (S03)
6. SOLDER PER (S04)




| CIRCUIT | INPUT TERM | TEST TERM | COMPONENTS | |
|---|---|---|---|---|
| 9 | 17 | 11 | P5,P1 | P9,P13 |
| 8 | 15 | 3 | R5,R1 | R9,R13 |
| 7 | 13 | 4 | T5,T1 | T9,T13 |
| 6 | 11 | 5 | V5,V1 | V9,V13 |
| 5 | 9 | 6 | X5,X1 | X9,X13 |
| 4 | 7 | 9 | M5,M1 | M9,M13 |
| 3 | 5 | 8 | K5,K1 | K9,K13 |
| 2 | 3 | 7 | H5,H1 | H9,H13 |
| 1 | 1 | 1 | F5,F1 | F9,F13 |


COMPANY CONFIDENTIAL INFORMATION

THIS DOCUMENT CONTAINS CONFIDENTIAL INFORMATION OF THE SPERRY RAND CORPORATION. IN CONSIDERATION OF THE RECEIPT OF THIS DOCUMENT, THE RECIPIENT AGREES NOT TO REPRODUCE, COPY, USE OR TRANSMIT THIS DOCUMENT AND/OR THE INFORMATION THEREIN CONTAINED, IN WHOLE OR IN PART, OR TO SUFFER SUCH ACTION BY OTHERS, FOR ANY PURPOSE, EXCEPT WITH THE WRITTEN PERMISSION, FIRST OBTAINED, OF SPERRY RAND CORPORATION, AND FURTHER AGREES TO SURRENDER SAME TO SPERRY RAND CORPORATION UPON DEMAND.


| | |
|---|---|
| SHEET | 1 OF 1 |
| REV. | — |
| CARD DESIGN LEVEL | |

UNLESS OTHERWISE SPECIFIED
DIMENSIONS IN INCHES TOL ON
2 PLACE DECIMALS ± | 3 PLACE DECIMALS ± | ANGLES ±
HOLE DIA TOL
0 THRU .250 +.003 −.002 | .251 THRU .500 ±.005 −.003 | .501 & LARGER +.010 −.005
THREADS: EXT CL 2A, INT CL 2B
COMMODITY CODE

| | | |
|---|---|---|
| LAYOUT | J MORRIS | 1/6/67 |
| DRAFTSMAN | J. F. SEEFELDT | 1/6/67 |
| CHECKER | [redacted] | 2-3-67 |
| ENGINEER | [redacted] | 2-13-67 |
| APPROVAL | [redacted] | 2-13-67 |
| | [redacted] | 2/14/67 |

**PART NO.** 3615597-00 [redacted]

FOR MATL REQUIREMENTS SEE L/M, L/M REV LETTER CONTROLS DOCUMENT.

CLASS A

UNIVAC
DIVISION OF SPERRY RAND CORPORATION

TITLE COMPONENT ASSEMBLY
HSB TERMINATION

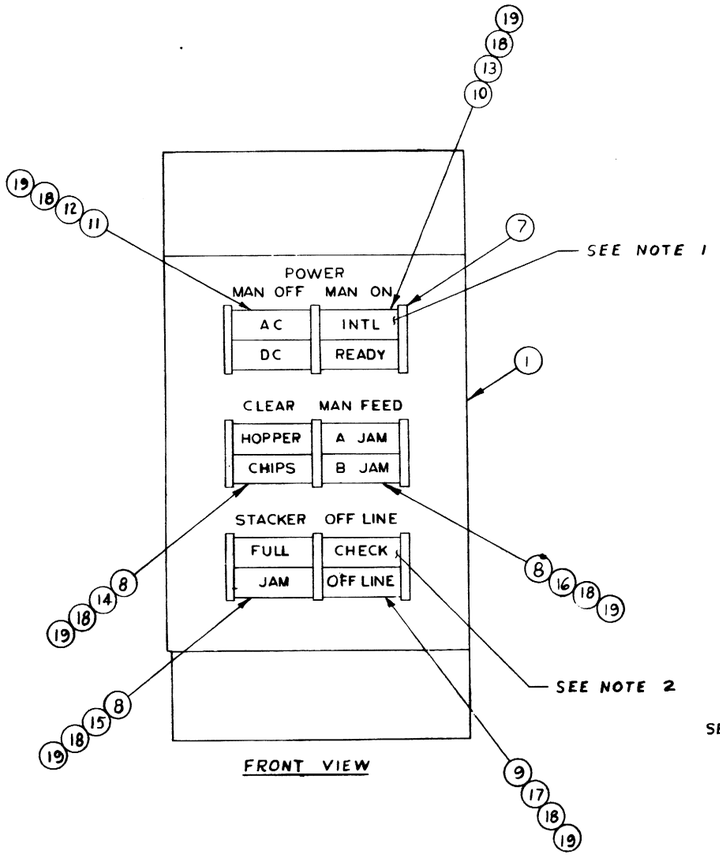
SIZE D | CODE IDENT NO. | DWG NO. 3615597

SCALE 2/1 | WEIGHT | SHEET 1 OF 1

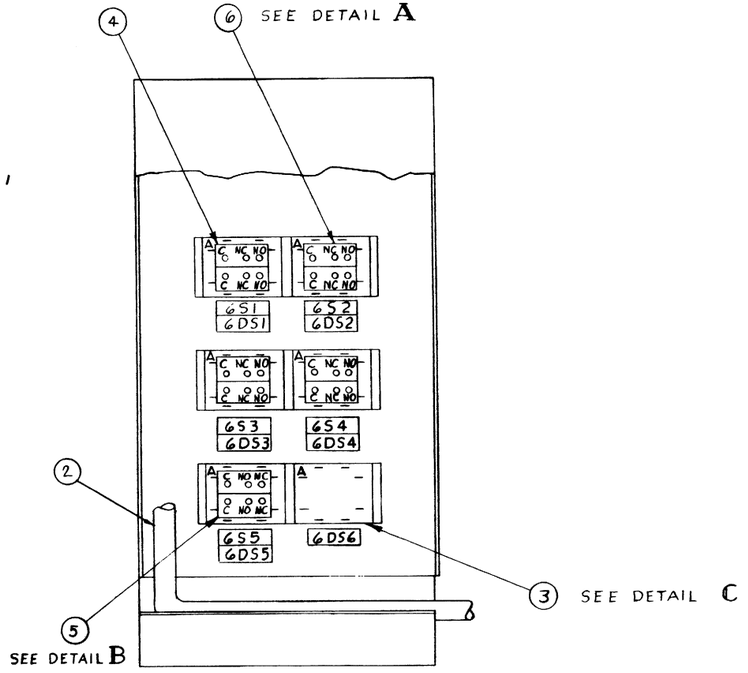
DO NOT SCALE THIS PRINT [redacted]

DWG NO. 3615597

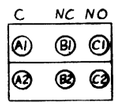
| REVISIONS | | | | | | |
|---|---|---|---|---|---|---|
| ZONE | LTR | EIR | DESCRIPTION – FOR DETAILS SEE EIR | CHK | DATE | APPROVED |
| | – | H-17584 -7 | RELEASED PT-00 | EB | 1-9-67 | |
| | A | H18384 -1 | SEE EIR - REV SH 1 | | 3-28-67 | |



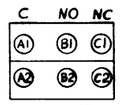

FRONT VIEW



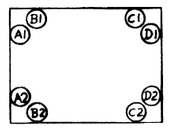

REAR VIEW




DETAIL A
TYPICAL TERMINAL ORIENTATION
FOR 6S1 THRU 6S4.




DETAIL B
TERMINAL ORIENTATION
FOR 6S5




DETAIL C
TYPICAL TERMINAL ORIENTATION
6DS1 THRU 6DS6

NOTES:
1. YELLOW PORTION OF INDICATOR BASE ITEM 10 TO BE ON UPPER HALF OF SWITCH (INTL).
2. RED PORTION OF INDICATOR BASE ITEM 9 TO BE ON UPPER HALF OF SWITCH (CHECK).
3. [ ] - INDICATES LOCATION OF IDENTIFICATION MARKER. SEE FIND # 22.
4. ALL WIRE IS #22 AWG UNLESS OTHERWISE SPECIFIED.
5. ON SHEET 2, NUMBERS IN PARENTHESIS - ( ), ARE "FIND" NUMBERS.
6. SOLDER PER DS 353.

DWG NO. 3615608

SIMILAR TO 3013433

PART NO. 3615608-00

IDENT NO.

FOR MATL REQUIREMENTS SEE L/M, L/M REV LETTER CONTROLS DOCUMENT.

| SHEET | REV | A | – |
|---|---|---|---|
| INDEX | SHEET | 1 | 2 |


COMPANY CONFIDENTIAL INFORMATION

THIS DOCUMENT CONTAINS CONFIDENTIAL INFORMATION OF THE SPERRY RAND CORPORATION. IN CONSIDERATION OF THE RECEIPT OF THIS DOCUMENT, THE RECIPIENT AGREES NOT TO REPRODUCE, COPY, USE OR TRANSMIT THIS DOCUMENT AND/OR THE INFORMATION THEREIN CONTAINED, IN WHOLE OR IN PART, OR TO SUFFER SUCH ACTION BY OTHERS, FOR ANY PURPOSE EXCEPT WITH THE WRITTEN PERMISSION, FIRST OBTAINED, OF SPERRY RAND CORPORATION, AND FURTHER AGREES TO SURRENDER SAME TO SPERRY RAND CORPORATION UPON DEMAND.


UNLESS OTHERWISE SPECIFIED

DIMENSIONS IN INCHES TOL. ON

| 2 PLACE DECIMALS | 3 PLACE DECIMALS | ANGLES |
|---|---|---|
| + / – | + / – | + / – |

HOLE DIA. TOL.

| 0 THRU .250 | .251 THRU .500 | .501 AND LARGER |
|---|---|---|
| + .003 – .002 | + .005 – .003 | + .010 – .005 |

THREADS: EXT. CL 2A, INT CL 2B

COMMODITY CODE

| | | DATE |
|---|---|---|
| LAYOUT | | |
| DRAFTSMAN | D. J. Lamb | 12-9-66 |
| CHECKER | E. A. Bowman | 12-27-66 |
| ENGINEER | A. Hoag | 1-9-67 |
| APPROVAL | [illegible] | 1-9-67 |
| MFG ENGINEER | [illegible] | 1-9-67 |

DO NOT SCALE THIS PRINT

CLASS A

UNIVAC
DIVISION OF SPERRY RAND CORPORATION

TITLE: CONTROL PANEL - WIRED

| SIZE | CODE IDENT NO. | DWG NO. |
|---|---|---|
| D | | 3615608 |

SCALE NONE | WEIGHT | SHEET 1 OF 2

| REVISIONS | | | | | | |
|---|---|---|---|---|---|---|
| SYM | ZONE | EIR | DESCRIPTION | CHK | DATE | APPROVED |

(21)(22)

6DS1 6S1 6DS2 6S2 6DS3 6S3 6DS4 6S4 6DS5 6S5 6DS6 6S6

6P1

HARNESS 3615615-00

| CLASS | TITLE |
|---|---|
| A | CONTROL PANEL WIRED |

Remington Rand Univac — DIVISION OF SPERRY RAND CORPORATION

| CODE IDENT NO. | SIZE | DWG NO. |
|---|---|---|
| | D | 3615608 |

SCALE NONE — SHEET 2 OF 2

DO NOT SCALE PRINT

DWG NO. 3615608

DETACHED LIST OF MATERIAL

TITLE OF DRAWING FROM WHICH DETACHED: CONTROL PANEL - WIRED

ENG PROC CODE 25 | UNIT OF MEASURE | DWG SIZE D

MFG PROC CODE | MFG CLASS A | DC H

UNIVAC

LM DWG NO 3613608 REV B

LIST OF MATERIAL CONFIGURATION | FSCM | SHEET NO 1

CODE IDENT NO | FSCM 4 | SHEET 3

MARK 3607 LIST OF MATERIAL

| QTY REQD | MFG QTY | MFG LOW | FIND NO | REFERENCE DES A | B | C | CODE IDENT | CENTERLINE NO / PART OR IDENT NO / DWG NO | SHEET | NOMENCLATURE OR DESCRIPTION | D C |
|---|---|---|---|---|---|---|---|---|---|---|---|
| AR | | | 22 | - - - - - - - - - - | | | B | 5016180 00 | | MARKERS-IDENTIFICATION-CONTROL PANEL WIRED | C |
| | | | Z31 | - - - - - - - - - - | | | H | 17584 07 | | L/M - PIC - REV HISTORY | |
| | | | Z32 | - - - - - - - - - - | | | H | 18381 06 | | L/M A PIC - REV HISTORY | |
| | | | Z33 | - - - - - - - - - - | | | H | 19384 01 | | L/M B PIC A REV HISTORY | * |

3-21-67

SHEET 3 OF 3

DETACHED LIST OF MATERIAL

TITLE OF DRAWING FROM WHICH DETACHED: CONTROL PANEL - WIRED

ENG PROC CODE 25 | UNIT OF MEASURE | DWG SIZE D

MFG PROC CODE | MFG CLASS A | DC H

UNIVAC

LM DWG NO 3613608 REV B

LIST OF MATERIAL CONFIGURATION | FSCM | SHEET NO 1

CODE IDENT NO | FSCM 4 | SHEET 1

MARK 3607 LIST OF MATERIAL

| QTY REQD | MFG QTY | MFG LOW | FIND NO | REFERENCE DES A | B | C | CODE IDENT | CENTERLINE NO / PART OR IDENT NO / DWG NO | SHEET | NOMENCLATURE OR DESCRIPTION | D C |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | PT NO. 3613608 00 THRU 00 | | | | | | | |
| 1 | | | 1 | - - - - - - - - - - | | | C | 3167095 00 | | CONTROL PANEL - MARKING | H |
| 1 | | | 2 | - - - - - - - - - - | | | U | 3515615 00 | | HARNESS - CONTROL PANEL | H |
| 1 | | | 3 | A034 | | | B | 5013561 00 | | INDICATOR LIGHT MOUNTING SUB-ASSY | C |
| 5 | | | 4 | AS51 | AS52 | 653 | A | 7 3414003 00 | | MOUNTING SUB ASSY,SENSITIVE SWITCH | H |
| | | | 3 | A034 | 6053 | 02 | | | | | |
| 1 | | | 5 | AS5 | | | C | 3005040 13 | | SWITCH, PUSH 2 POLE DOUBLE THROW ALTERNATE | H |
| 4 | | | 6 | AS1 | AS2 | 653 | C | 3005040 05 | | SWITCH, PUSH 2 POLE DOUBLE THROW MOMENTARY | H |
| | | | 2 | AS4 | | 02 | | | | | |
| 9 | | | 7 | - - - - - - - - - - | | | C | 3005082 02 | | PLATE, SUB-ASSY, MTG SWITCH GRAY BARRIER | H |
| 3 | | | 8 | - - - - - - - - - - | | | B | 5013562 00 | | BASE INDICATOR LIGHT-SPLIT,RED | C |
| 1 | | | 9 | - - - - - - - - - - | | | B | 5013497 00 | | BASE INDICATOR LIGHT-SPLIT, YELLOW/RED | C |
| 1 | | | 10 | - - - - - - - - - - | | | B | 5013563 00 | | BASE IND LT SPLIT YEL/GRN YELLOW/GREEN | C |

DETACHED LIST OF MATERIAL

TITLE OF DRAWING FROM WHICH DETACHED: CONTROL PANEL - WIRED

ENG PROC CODE 25 | UNIT OF MEASURE | DWG SIZE D

MFG PROC CODE | MFG CLASS A | DC H

UNIVAC

LM DWG NO 3613608 REV B

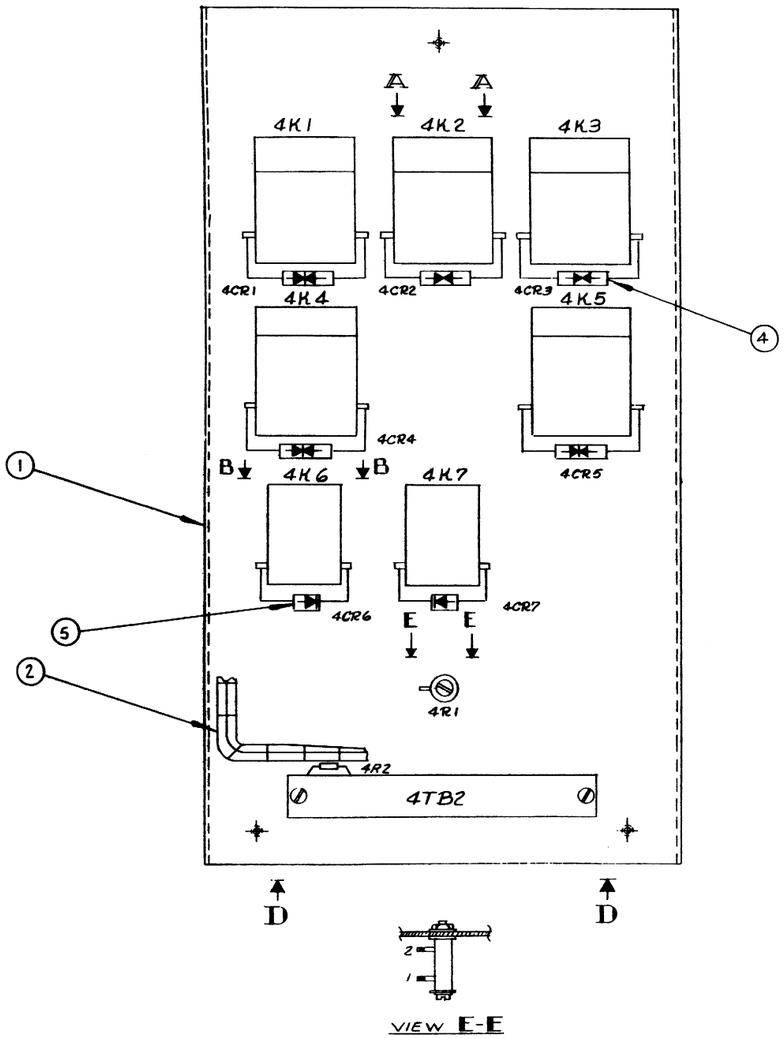
LIST OF MATERIAL CONFIGURATION | FSCM | SHEET NO 1

CODE IDENT NO | FSCM 4 | SHEET 2

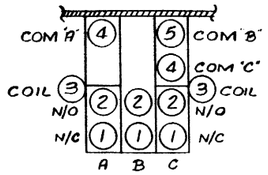
MARK 3607 LIST OF MATERIAL

| QTY REQD | MFG QTY | MFG LOW | FIND NO | REFERENCE DES A | B | C | CODE IDENT | CENTERLINE NO / PART OR IDENT NO / DWG NO | SHEET | NOMENCLATURE OR DESCRIPTION | D C |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | 11 | - - - - - - - - - - | | | B | 5012673 00 | | BASE,INDICATOR LIGHT,SPLIT, WHITE | C |
| 1 | | | 12 | - - - - - - - - - - | | | B | 5012788 00 | | INSERT,LETTERED MARKING AC & DC | C |
| 1 | | | 13 | - - - - - - - - - - | | | B | 5013557 00 | | INSERT,LETTERED | C |
| 1 | | | 14 | - - - - - - - - - - | | | B | 5013558 00 | | INSERT LETTERED | C |
| 1 | | | 15 | - - - - - - - - - - | | | B | 5013559 00 | | INSERT LETTERED | C |
| 1 | | | 16 | - - - - - - - - - - | | | B | 5013560 00 | | INSERT LETTERED | C |
| 1 | | | 17 | - - - - - - - - - - | | | B | 3166767 00 | | INSERT, LETTERED | H |
| 6 | | | 18 | - - - - - - - - - - | | | B | 5013494 00 | | CAP INDICATOR LIGHT TRANSPARENT | C |
| 24 | | | 19 | - - - - - - - - - - | | | A | 6912414 00 | | LAMP,INCAND-TI 3/4 MIDGET GROOVE 28 VOLTS - .04 AMPS | A |
| 32 | | | 20 | - - - - - - - - - - | | | B | 7 6301153 00 | | WIRE, ELECTRICAL TINNED COPPER .032 OD NO.20 GAUGE | H |
| 28 | | | 21 | - - - - - - - - - - | | | C | 3006190 03 | | INSULATION, SLEEVING, ELECT, .038 ID X .016 WALL #19 WIRE | H |

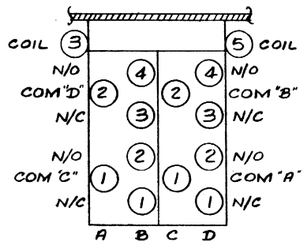
| REVISIONS | | | | | |
|---|---|---|---|---|---|
| SYM | ZONE | EIR | DESCRIPTION | DR | DATE | APPROVED |
| – | | A11501-67 B11833,4,6 –1 | RELEASED | | 1-9-67 | |
| A | | | REVISED SH. 1 AND 2. SEE EIR | | 3-14-67 | |
| B | | A 17601-6 C | SEE EIR | | 4-4-67 | |
| C | | 10391-1 | RELEASED -01 PT. NO. SEE EIR | | 11-1-67 | |



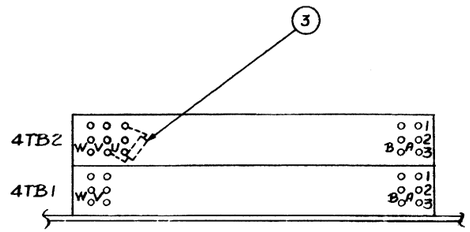

VIEW E-E




VIEW A-A
TYP FOR 4K1 THRU 4K5




VIEW B-B
TYP FOR 4K6 & 4K7




VIEW D-D

NOTES:

1. ALL WIRE # 22 AWG UNLESS OTHERWISE SPECIFIED.
2. NUMBERS IN PARENTHESES ( ) ARE FIND NUMBERS.

INFORMATION ON THIS SHEET FOR PART-00

FOR MATERIAL REQUIREMENTS SEE DETACHED LIST OF MATERIAL
LM 3615618

REVISION LETTER IN LWR RH CORNER APPLIES TO PICTORIAL SHT (S)
LM REV LETTER CONTROLS DOCUMENT

| REV | C | C | C | C |
|---|---|---|---|---|
| SHEET | 1 | 2 | 3 | 4 |

PART No. 3615618-00

THIS DOCUMENT CONTAINS CONFIDENTIAL INFORMATION OF THE REMINGTON RAND DIVISION OF SPERRY RAND CORPORATION AND IS FURNISHED PURSUANT TO THE FOLLOWING INSTRUMENT:

ON THE UNDERSTANDING THAT THIS DOCUMENT AND THE INFORMATION THEREON MAY NOT BE DEALT WITH IN ANY MANNER EXCEPT FOR THE PURPOSES OF THAT INSTRUMENT OR AS OTHERWISE PERMITTED IN WRITING BY THE REMINGTON RAND DIVISION OF SPERRY RAND CORPORATION.

NEXT ASSY | EQUIPMENT
APPLICATION

UNLESS OTHERWISE SPECIFIED
ALL DIMENSIONS IN INCHES
TOLERANCE ON
FRACTIONS ± — DECIMALS ± — ANGLES ± —
DECIMAL HOLE DIAMETER TOLERANCE
0 THRU .250 + .003 — .002
.251 THRU .500 + .005 — .003
.501 & LARGER + .010 — .005
THREADS: EXT CL 2A, INT CL 2B
MATERIAL
FINISH

| | | DATE |
|---|---|---|
| LAYOUT | J. Morris | 10-14-66 |
| DRAFTSMAN | J. H. Seefeldt | 11-1-67 |
| CHECKER | | 11-9-67 |
| ENGINEER | N. E. Eble | 11-8-67 12-13-67 |
| APPROVAL | | 12-13-67 |
| MFG. ENGINEER | | 11-1-67 |

CLASS A

Remington Rand Univac
DIVISION OF SPERRY RAND CORPORATION

TITLE
PANEL ASSEMBLY, RELAY-WIRED

CODE IDENT NO.
SIZE D
DWG NO. 3615618
SCALE NONE
SHEET 1 OF 4

DO NOT SCALE THIS PRINT

DWG NO 3615618

| REVISIONS | | | | | | |
|---|---|---|---|---|---|---|
| SYM | ZONE | EIR | DESCRIPTION | CHK | DATE | APPROVED |
| A | | M18544-1 | SEE EIR | | 3-14-67 | |
| B | | 13601-C | SEE EIR | | 5-4-68 | |
| C | | V0391-1 | SEE EIR | | 11-14-68 | |

4K3 4K5 4K2 4K7 4K1 4K4 4K6 4TB2 4TB1 4R1 4R2 4RC1

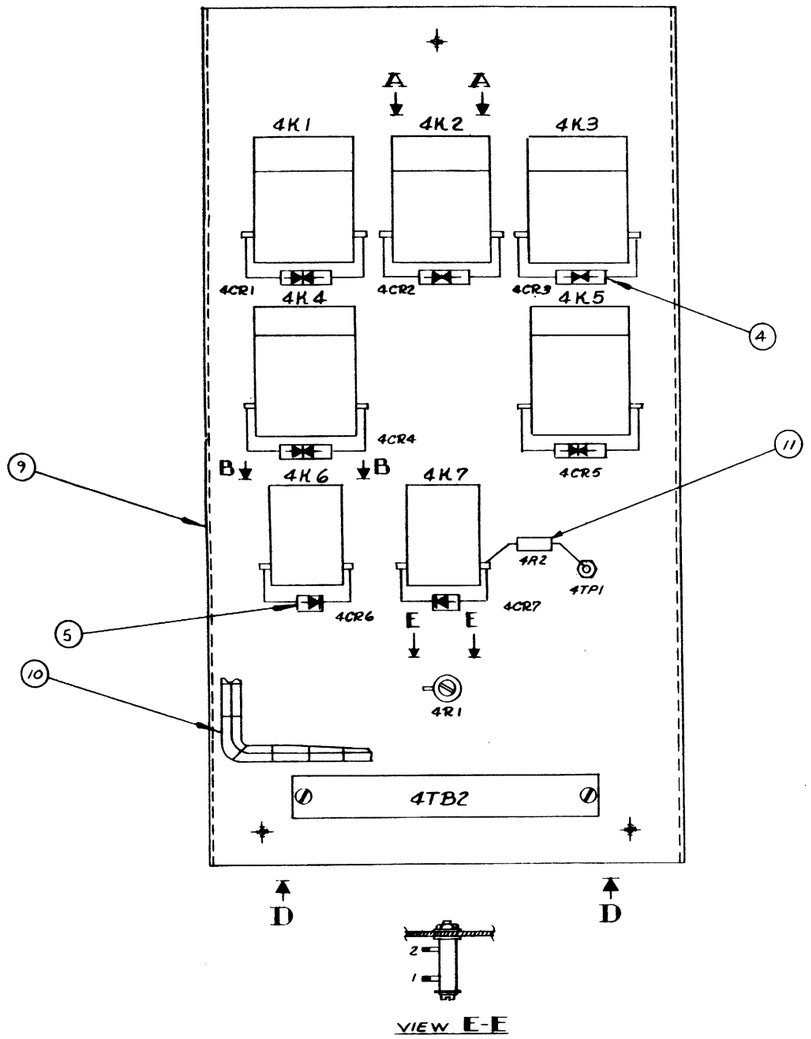
HARNESS 3615619-00

INFORMATION ON THIS SHEET FOR PART-00

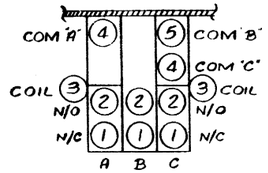
DWG NO 3615618

| | | |
|---|---|---|
| CLASS A | Remington Rand Univac | |
| TITLE | PANEL ASSEMBLY, RELAY-WIRED | |
| CODE IDENT NO | SIZE D | DWG NO. 3615618 |
| SCALE NONE | | SHEET 1 OF 4 |

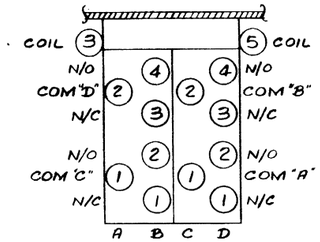
| REVISIONS | | | | | | |
|---|---|---|---|---|---|---|
| SYM | ZONE | EIR | DESCRIPTION | CHK | DATE | APPROVED |
| C | | E 10311-1 | RELEASED 01 PT NO. SEE EIR | | 1/9/68 | D. A. |



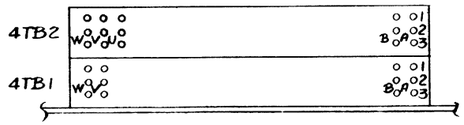

VIEW E-E




VIEW A-A
TYP FOR 4K1 THRU 4K5




VIEW B-B
TYP FOR 4K6 & 4K7




VIEW D-D

INFORMATION ON THIS SHEET FOR PART-01

PART NO. 3615618-01

THIS DOCUMENT CONTAINS CONFIDENTIAL INFORMATION OF THE REMINGTON RAND DIVISION OF SPERRY RAND CORPORATION AND IS FURNISHED PURSUANT TO THE FOLLOWING INSTRUMENT.

ON THE UNDERSTANDING THAT THIS DOCUMENT AND THE INFORMATION THEREON SHALL NOT BE DISCLOSED TO ANY OTHER PARTY FOR THE PURPOSES OF THAT INSTRUMENT OR AS OTHERWISE PERMITTED IN WRITING BY THE REMINGTON RAND DIVISION OF SPERRY RAND CORPORATION

| | | |
|---|---|---|
| UNLESS OTHERWISE SPECIFIED | LAYOUT J. PRYPUTNIEWICZ | DATE 4/17/68 |
| ALL DIMENSIONS IN INCHES<br>TOLERANCE ON FRACTIONS ± —, DECIMALS ± —, ANGLES ± — | DRAFTSMAN J. Pryputniewicz | 4/17/68 |
| DECIMAL HOLE DIAMETER TOLERANCE<br>0 THRU .250: +.003 −.002; 251 THRU .500: +.005 −.003; .501 & LARGER: +.010 −.005 | CHECKER | |
| THREADS: EXT CL 2A, INT CL 2B | ENGINEER J. Hay | 4/15/68 |
| MATERIAL | APPROVAL J. Hood | 4/15/68 |
| FINISH | MFG ENGINEER | |
| NEXT ASSY / EQUIPMENT<br>APPLICATION | | |

CLASS A

Remington Rand Univac
DIVISION OF SPERRY RAND CORPORATION

TITLE
PANEL ASSEMBLY, RELAY-WIRED

CODE IDENT NO

SIZE D

DWG NO 3615618

SCALE NONE

SHEET 3 × 4

DO NOT SCALE THIS PRINT

DWG # 3615618

| REVISIONS | | | | | |
|---|---|---|---|---|---|
| SYM | ZONE | EIR | DESCRIPTION | CHK | DATE | APPROVED |
| C | / | KM391-1 | RELEASED 01 PT. NO. SEE EIR | | 7/16/91 | D. H. |

4K3 4K5 4K2 4K7 4K1 4K4 4K6

4TP1

4R1

4TB2

| | | | | |
|---|---|---|---|---|
| 4K1-A4 | GN | A | 4K6-C1 | WH |
| 4K6-D2 | GY | B | | |
| 4K4-C5 | BL | C | 4K4-C3 | OR |
| 4K4-B2 | RD | D | | |
| 4K1-C3 | VT | E | | |
| 4K2-C3 | GN | F | | |
| 4K3-C3 | BK | G | | |
| 4K1-A2 | BL | H | | |
| 4K2-A2 | YW | L | | |
| 4K3-A2 | RD | K | | |
| 4K5-C3 | GN | L | | |
| 4K5-B2 | GY | M | | |
| 4K7-C2 | BN | N | | |
| 4K7-D4 | RD | P | | |
| 4K5-C3 | YW | R | | |
| 4K5-A3 | VT | S | 4K4-A3 | WH |
| 4K7-B2 | GN | T | | |
| 4TP1 | WH | U | | |
| 4K5-C4 | VT | V | | |
| 4K7-A3 | BL | W | | |

4TB1

| | | | | |
|---|---|---|---|---|
| 4R1-1 | YW | A | | |
| 4K6-A3 | BK | B | | |
| | | C | | |
| | | D | | |
| | | E | | |
| | | F | | |
| | | G | | |
| | | H | | |
| | | K | | |
| | | L | 4K7-C1 | GY |
| 4K5-A4 | YW | M | 4K7-D1 | OR |
| 4K5-A1 | BK | N | | |
| 4K4-A4 | YW | P | | |
| 4K4-A1 | BK | R | | |
| 4K3-C5 | YW | S | | |
| 4K3-B2 | BK | T | | |
| 4K1-C5 | YW | V | | |
| 4K1-B2 | BK | W | | |

HARNESS 5028980-00

INFORMATION ON THIS SHEET FOR PART-01

CLASS A

Remington Rand Maine
DIVISION OF SPERRY RAND CORPORATION

TITLE
PANEL ASSEMBLY, RELAY-WIRED

| CODE IDENT. NO. | SIZE | DWG NO. |
|---|---|---|
| | D | 3615618 |

SCALE NONE | SHEET 4 OF 4

DO NOT SCALE

3615618 ON DWG

## DETACHED LIST OF MATERIAL

TITLE OF DRAWING FROM WHICH DETACHED: PANEL ASSY, RELAY - WIRED

PART VARIES UNDER EACH HEADER

UNIVAC — DIVISION OF SPERRY RAND CORPORATION

LM — DWG. NO. 3615618 — REV. D *

ENG. PROJ. CODE: 25 | UNIT OF MEASURE: A | DWG SIZE: D

MFG. PROJ. CODE: | L/M CLASS: A | DCL: C

LIST OF MATERIAL IDENTIFICATION: | ISSUE NO. 1

CODE IDENT. NO.: | PIC REV.: C | SHEET: 1

JULY 23,68 LIST OF MATERIAL

| QTY REQD | MFG QTY | MFG U/M | FIND | REFERENCE DES A | REFERENCE DES B | REFERENCE DES C | CODE IDENT | SIZE | IDENTIFICATION INFO PART OR IDENT NO. DWG NO. | IDENTIFICATION INFO DASH | NOMENCLATURE OR DESCRIPTION | DCL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | - 4 | | | | | | | | PT NO. 3615618 00 THRU 01 | |
| | | | 1 # | - - - | - - - | - - - | - - | | | | VARIABLE-SEE BELOW | |
| | | | 2 # | - - - | - - - | - - - | - - | | | | VARIABLE-SEE BELOW | |
| | | | 3 # | - - - | - - - | - - - | - - | | | | VARIABLE-SEE BELOW | |
| 5 | | | 4 | 4CR1 | THRU | 4CR5 | | B | 3012713 | 01 | SEMICONDUCTOR, DIODE - | C |
| | | | | | | | | | | | RMS INPUT VOLTS 30 | |
| 2 | | | 5 | 4CR6 | 4CR7 | | | A | 2025068 | 00 | SEMICONDUCTOR DEVICE DIODE | H |
| | | | | | | | | | | | POWER SILICON TYPE IN2070 | |
| | | | 6 # | - - - | - - - | - - - | - - | | | | VARIABLE-SEE BELOW | |
| AR | | | 7 | - - - | - - - | - - - | - - | C | 3173750 | 02 | INSULATION SLV, ELEC- PVC | H * |
| | | | | | | | | | | | 20 AWG .034 ID,, .016 WALL THK | |
| 1 | | | 8 | - - - | - - - | - - - | - - | C | 3011609 | 04 | CAPACITOR-RESISTOR | H |
| | | | | | | | | | | | 100 OHMS 0.1 UF +-20% | |
| | | | 9 # | - - - | - - - | - - - | - - | | | | VARIABLE-SEE BELOW | |
| | | | 10 # | - - - | - - - | - - - | - - | | | | VARIABLE-SEE BELOW | |
| | | | 11 # | - - - | - - - | - - - | - - | | | | VARIABLE-SEE BELOW | |
| | | | Z01 | - - - | - - - | - - - | - - | | H 17584 | 09 | L/M - PIC - REV HISTORY | |

FORM ≠A 1648 V (REV. 6/63)

## DETACHED LIST OF MATERIAL

TITLE OF DRAWING FROM WHICH DETACHED: PANEL ASSY, RELAY - WIRED

PART VARIES UNDER EACH HEADER

UNIVAC — DIVISION OF SPERRY RAND CORPORATION

LM — DWG NO. 3615618 — REV D *

ENG. PROJ. CODE: 25 | UNIT OF MEASURE: A | DWG SIZE: D

MFG. PROJ. CODE: | L/M CLASS: A | DCL: C

LIST OF MATERIAL IDENTIFICATION: | ISSUE NO. 1

CODE IDENT NO.: | PIC REV.: C | SHEET: 3

JULY 23,68 LIST OF MATERIAL

| QTY. REQD. | MFG QTY | MFG U/M | FIND | REFERENCE DES A | REFERENCE DES B | REFERENCE DES C | CODE IDENT | SIZE | IDENTIFICATION INFO PART OF IDENT NO. DWG NO. | IDENTIFICATION INFO DASH | NOMENCLATURE OR DESCRIPTION | DCL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | 11 | 4R2 | | | | C | 3010883 | 50 | RESISTOR FXD FILM - | H |
| | | | | | | | | | | | 1200 OHMS 1/2WATT +- 2% | |

M. Hanley

SHEET 3 OF 3 FORM ≠A 1648 V (REV. 6/63)

## DETACHED LIST OF MATERIAL

TITLE OF DRAWING FROM WHICH DETACHED: PANEL ASSY, RELAY - WIRED

PART VARIES UNDER EACH HEADER

UNIVAC — DIVISION OF SPERRY RAND CORPORATION

LM — DWG. NO. 3615618 — REV. D *

ENG. PROJ. CODE: 25 | UNIT OF MEASURE: A | DWG SIZE: D

MFG. PROJ. CODE: | L/M CLASS: A | DCL: C

LIST OF MATERIAL IDENTIFICATION: | ISSUE NO. 1

CODE IDENT. NO.: | PIC REV.: C | SHEET: 2

JULY 23,68 LIST OF MATERIAL

| QTY REQD | MFG QTY | MFG U/M | FIND | REFERENCE DES A | REFERENCE DES B | REFERENCE DES C | CODE IDENT | SIZE | IDENTIFICATION INFO PART OR IDENT NO. DWG NO. | IDENTIFICATION INFO DASH | NOMENCLATURE OR DESCRIPTION | DCL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Z02 | - - - | - - - | - - - | - - | | H 18348 | 01 | L/M A PIC A REV HISTORY | |
| | | | Z03 | - - - | - - - | - - - | - - | | H 19601 | 06 | L/M B PIC B REV HISTORY | |
| | | | Z04 | - - - | - - - | - - - | - - | | C 10391 | 01 | L/M C PIC C REV HISTORY | |
| | | | Z05 | - - - | - - - | - - - | - - | | H 19953 | 09 | L/M D PIC C REV HISTORY | * |
| - - | - - | - - | - - | - - - | - - - | - - - | - - - | - | - - - - - | - - - - | 3615618 00 VARIABLE DATA | |
| 1 | | | 1 | - - - | - - - | - - - | - - | C | 5016524 | 00 | PANEL ASSY RELAY MTG | C |
| | | | | | | | | | | | USED ON PART 2009 & 2011 | |
| 1 | | | 2 | - - - | - - - | - - - | - - | D | 3615619 | 00 | HARNESS - RELAY PANEL | C |
| 1 | | | 3 | 4R2 | | | | B | 5013780 | 00 | RESISTOR ASSEMBLY | B |
| 1 | | | 6 | - - - | - - - | - - - | - - | B | 7 6501155 | 00 | WIRE, ELECTRICAL TINNED COPPER | H |
| | | | | | | | | | | | .032 OD NO.20 GAUGE | |
| - - | - - | - - | - - | - - - | - - - | - - - | - - - | - | - - - - - | - - - - | 3615618, 01 VARIABLE DATA | |
| 1 | | | 9 | - - - | - - - | - - - | - - | C | 5016524 | 01 | PANEL ASSY RELAY MTG | C |
| | | | | | | | | | | | USED ON PART 0606 | |
| 1 | | | 10 | - - - | - - - | - - - | - - | D | 5028980 | 00 | HARNESS RELAY PANEL | C |

FORM ≠A 1648 V (REV. 6/63)

## FEATURES & SELECTIONS

| FEATURE NO. | FIND NO. | PART. IDENT. NO. | NOMENCLATURE OR DESCRIPTION | REMARKS | REF. QTY. |
|---|---|---|---|---|---|
| | 79 | 5016950-00 | DISTRIBUTION BOX - 60 CYCLE | ONE MUST BE SELECTED. | 1 |
| | | 5016950-01 | DISTRIBUTION BOX - 50 CYCLE | | |
| | 80 | 3006160-00 | LOW VOLTAGE POWER SUPPLY 60 CYCLE | ONE MUST BE SELECTED. | 1 |
| | | 3006160-01 | LOW VOLTAGE POWER SUPPLY 50 CYCLE | | |
| | 82 | 5018174-00 | HIGH VOLTAGE POWER SUPPLY 60 CYCLE | ONE MUST BE SELECTED. | 1 |
| | 83 | 5018173-00 | HIGH VOLTAGE POWER SUPPLY 50 CYCLE | | |
| | 84 | 5013389-00 | ELAPSED TIME METER 60 CYCLE | ONE MUST BE SELECTED | 1 |
| | 85 | 5013388-00 | ELAPSED TIME METER 50 CYCLE | | |
| | 86 | 3162816 -26 & -27 | PLATE IDENTIFICATION, LETTERED | ONE MUST BE SELECTED | 1 |
| | 87 | 3614114-00 | 200 CPM W/O 80 COL. PUNCH READ NO LIST 60 CYCLE | ONE MUST BE SELECTED. APPLICABLE FOR FACTORY INSTALLATION ONLY. | 1 |
| | | 3614114-01 | 200 CPM W/O 80 COL. PUNCH READ NO LIST 50 CYCLE | | |
| F0945-00 | | 3614114-02 | 250 CPM W/O 80 COL. PUNCH READ 60 CYCLE | | |
| F0945-01 | | 3614114-03 | 250 CPM W/O 80 COL. PUNCH READ 50 CYCLE | | |
| F0875-00 | | 3614114-04 | 200 CPM WITH 80 COL. PUNCH READ 60 CYCLE | | |
| | | 3614114-05 | 200 CPM WITH 80 COL. PUNCH READ 50 CYCLE | | |
| | | 3614114-06 | 250 CPM WITH 80 COL. PUNCH READ 60 CYCLE | | |
| | | 3614114-07 | 250 CPM WITH 80 COL. PUNCH READ 50 CYCLE | | |
| F1046-00 | 88 | 3614115-00 | CARD SCORE INHIBIT FEATURE 80 COL. CARD PUNCH | APPLICABLE FOR FACTORY OR FIELD INSTALLATION. | 1 |
| F1046-01 | | 3614115-01 | CARD SCORE INHIBIT FEATURE 80 COL. PUNCH READ | | |
| | 48 | 3616164-04 | CABLE I/O INTERFACE 25 FT. LG. 55 CONTACT P.C. BOARD BOTH ENDS. | THE NUMBER OF I/O CABLES DEPEND ON SYSTEM CONFIGURATION. TWO I/O CABLES MUST BE SUPPLIED WITH THE PUNCH, ONLY IF THE CONTINUATION OF THE I/O CHANNEL REQUIRES CONNECTION TO ANOTHER PERIPHERAL DEVICE. CABLE CONNECTOR POSITIONS IN CARD MODULE ARE AS DESIGNATED ON F01 OR F02 FOR OTHER AVAILABLE CABLE LENGTHS, SEE TABULATION ON CABLE DRAWING. | 2 1 |
| F0875-00 | 87 | 3614114-08 | 80 COLUMN PUNCH READ | APPLICABLE FOR FIELD INSTALLATION ONLY. | 1 |
| F0945-00 | 87 | 3614114-09 | 250 CPM 60 CYCLES | | 1 |
| F0945-01 | 87 | 3614114-10 | 250 CPM 50 CYCLES | | 1 |

NOTES:

I. FEATURES & SELECTIONS: SEE CHART.

II. APPLICATION:

1. PHYSICAL DATA:
   - A. WEIGHT: 800 LBS. APPROX.
   - B. POWER REQUIREMENTS: 1.5KVA.
   - C. HEAT GENERATION: 4800 BTU PER HR
   - D. RELATIVE HUMIDITY: 85% MAX. 20% MIN.
   - E. OPERATING TEMP: 94°F MAX., 60°F MIN.
   - F. OPERATING PRESSURE: 32 INCHES MERCURY MAX., 23 INCHES MERCURY MIN.
   - G. FLOOR LOADING UNDER LEVELING PAD: 17 LBS PER SQ. IN.
   - H. EQUIPMENT SHALL WITHSTAND SUSTAINED VIBRATIONS UP TO 0.25G

III. MANUFACTURING:

1. SHIPPING INSTRUCTIONS:
   - A. SECURE TO VAN FLOOR FOR SHIPMENT.
2. INTERNAL WIRING: SEE SHEETS 8 TO 15.
   - A. FOR SYSTEMS WIRING, SEE (R01) & (R07)
   - B. ◢ INDICATES FOR REFERENCE ONLY.
   - C. NUMBERS IN PARENTHESES ( ) ARE FIND NUMBERS.
   - D. ALL WIRE #22 AWG UNLESS OTHERWISE INDICATED.
   - E. TERMINAL DESIGNATIONS OTHER THAN THOSE OBTAINED FROM ACTUAL COMPONENTS ARE ARBITRARILY ASSIGNED.
   - F. FOR SCHEMATICS, SEE (F01) OR (F02)
   - G. FOR LOGIC INDEX REVISION LEVEL & RELATED PRINTOUTS, SEE (R02) .
   - H. SOLDER ELECTRICAL TERMINATIONS PER (S02) .
   - J. ▭ INDICATES LOCATION OF IDENTIFICATION MARKERS, FIND (50) .
   - K. FOR WIRING OR PATCH CARDS (3614371-00, 01, & 02, MODULE LOCATIONS E9, E10, & E11 RESPECTIVELY) USE FIND NO (180) . SEE 3842962-00, REVISION LEVEL AS INDICATED ON (R02) , FOR CONNECTIONS.
3. COLOR SCHEME:
   - A. COLOR SCHEME TO BE PER (R03) .
4. INTERCONNECTING CABLE INFORMATION:
   - A. FOR INTERFACE LOGIC, SEE (R02) .

IV. INSTALLATION:

1. CLEARANCE REQUIREMENTS:
   - A. FRONT: 36 INCHES
   - B. REAR: 36 INCHES
   - C. LEFT SIDE: 36 INCHES
   - D. RIGHT SIDE: 36 INCHES

V. MISCELLANEOUS REFERENCE DOCUMENTS:

1. SPARE PARTS LIST (R04) .
2. TEST PROGRAM (R05) .
3. ZONE IDENTIFICATION (R06) .
4. PUNCH COMPONENTS REPRESENTATION DWG. 5016067-00.

### REVISIONS

| ZONE | LTR | EIR | DESCRIPTION — FOR DETAILS SEE EIR | CHK | DATE | APPROVED |
|---|---|---|---|---|---|---|
| | - | H175[illegible] -1 -2 | RELEASED PT.-00 | | 3-1-67 | |
| | A | H13391 -1 | REVISION ON SH 1 & 7 SEE EIR | | 4-3-67 | |
| | B | H18641 -1 | REVISION ON THIS SHEET SEE EIR | | 5-25-67 | |
| | C | H18668 -1 | REVISION ON SH 8 & 9 SEE EIR | | 6-26-67 | |
| | D | H18971 -2 | REVISION ON SH 1 & 4 SEE EIR | | 8-24-67 | |
| | F | H18991 -2 | REVISION ON SH 1, 5, 8 & 9 (SEE EIR) | | 10-19-67 | |
| | G | C10047-1 | REVISION ON SH 5 (SEE EIR) | | 11-1-67 | |
| | H | H19401 -1 | REVISION ON SH 3 & 7 SEE EIR | | 11-1-67 | |
| | J | H19601B | SEE EIR REV SH #1, 4, 5, 11 | | 2-14-68 | |
| | K | C10391-1 | SEE EIR REV SH. #1, 2 & 8 | | 2-[illegible]-68 | |
| | M | C 10787-7 | SEE EIR | | 9-17-68 | |
| | N | C10968 -1 | SEE EIR | | [illegible] | |
| | P | C 11014-2 | SEE EIR | | 12-16-68 | |
| | R | C11283-1 | SEE EIR | | 4-10-69 | |
| | S | C11283-2 | SEE EIR | | 4-16-69 | |
| | T | C 11418-2 | SEE EIR | | 4-24-69 | |
| | U | C11602-1 | SEE EIR | | 7-3-69 | |

## FEATURES & SELECTIONS

| FEATURE NO. | FIND NO. | PART/IDENT. NO. | NOMENCLATURE OR DESCRIPTION | REMARKS | REF. QTY. |
|---|---|---|---|---|---|
| | 1 | 3615639-00 | PACKAGE COMPLEMENT DIAGRAM MODULE "V" -80 COLUMN I/O INTERFACE PER SU00039 REV. A | ONE MUST BE SELECTED APPLICABLE FOR FACTORY INSTALLATION ONLY | 1 |
| | | 3615639-01 | PACKAGE COMPLEMENT DIAGRAM MODULE "V" -80 COLUMN I/O INTERFACE PER SU00039 REV. B | | |

(CONTINUED ON SH.2, ZONE D-8)

SHEET INDEX

| REVISION | U | T | M | U | H | R | S | R | K | - |
|---|---|---|---|---|---|---|---|---|---|---|
| SHEET NO. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| REVISION | - | R | - | - | - | | | | | - |
| SHEET NO. | 11 | 12 | 13 | 14 | 15 | | | | | |

COMPANY CONFIDENTIAL INFORMATION
THIS DOCUMENT CONTAINS CONFIDENTIAL INFORMATION OF THE SPERRY RAND CORPORATION. IN CONSIDERATION OF THE RECEIPT OF THIS DOCUMENT, THE RECIPIENT AGREES NOT TO REPRODUCE, COPY, USE OR TRANSMIT THIS DOCUMENT AND/OR THE INFORMATION THEREIN CONTAINED, IN WHOLE OR IN PART, OR TO SUFFER SUCH ACTION BY OTHERS, FOR ANY PURPOSE, EXCEPT WITH THE WRITTEN PERMISSION, FIRST OBTAINED, OF SPERRY RAND CORPORATION, AND FURTHER AGREES TO SURRENDER SAME TO SPERRY RAND CORPORATION UPON DEMAND.

UNLESS OTHERWISE SPECIFIED
DIMENSIONS IN INCHES TOL. ON 2 PLACE DECIMALS ± / 3 PLACE DECIMALS ± / ANGLES ± /
HOLE DIA. TOL. 0 THRU .250 + .003 − .002 / .251 THRU .500 + .005 − .003 / .501 AND LARGER + .010 − .005
THREADS: EXT. CL 2A, INT CL 2B
COMMODITY CODE

| | | DATE |
|---|---|---|
| LAYOUT | [illegible] | [illegible] |
| DRAFTSMAN | [illegible] | 1-2-67 |
| CHECKER | [illegible] | [illegible] |
| ENGINEER | H. E. STAHL | 3-1-67 |
| APPROVAL | [illegible] | 3-1-67 |
| MFG ENGINEER | [illegible] | 3/16/67 |

DO NOT SCALE THIS PRINT

PART NO. 3615623-00 [illegible]

FOR MATL REQUIREMENTS SEE L/M, L/M REV LETTER CONTROLS DOCUMENT.

CLASS A

UNIVAC
DIVISION OF SPERRY RAND CORPORATION

TITLE
INTERFACE CONTROL ASSY
ROW PUNCH, TYPE 0604-00 & 01

SIZE D | CODE IDENT. NO. | DWG NO. 3615623

SCALE NONE | WEIGHT | SHEET 1 OF 15

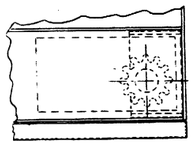
[illegible] A B C D F G M J K M N P R S T

DWG NO. 3615623

| FEATURES & SELECTIONS | | | | | | |
|---|---|---|---|---|---|---|
| FEATURE NO. | FIND NO. | PART IDENT NO. | NOMENCLATURE OR DESCRIPTION | REMARKS | | REF. QTY. |
| | 129 | 3615618-00 | PANEL ASSY RELAY WIRED I O INTERFACE PER SU00039, REV. A | FOR SCHEMATIC SEE (F01) | ONE MUST BE SELECTED APPLICABLE FOR FACTORY INSTALLATION ONLY | 1 |
| | | 3615618-01 | PANEL ASSY RELAY WIRED USE WITH I O INTERFACE PER SU00039 REV B | FOR SCHEMATIC SEE (F02) | | |
| | 187 | 5028991-00 | JUMPER WIRE ASSEMBLY | JUMPER FROM VOID-18 TO 4TB2-V1 I O INTERFACE PER SU00039, REV.B | APPLICABLE FOR FACTORY INSTALLATION ONLY | 1 |

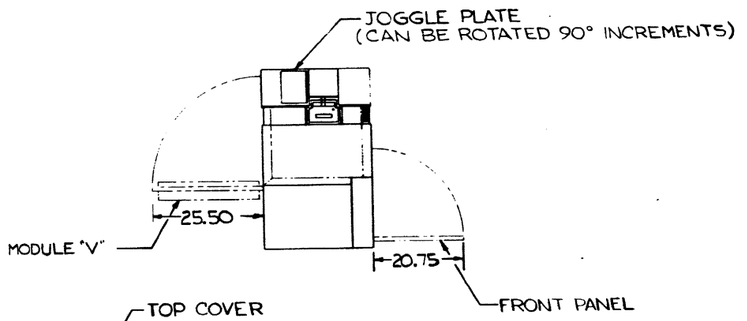
| FEATURES & SELECTIONS | | | | | |
|---|---|---|---|---|---|
| FEATURE NO. | FIND NO. | PART IDENT. NO. | NOMENCLATURE OR DESCRIPTION | REMARKS | REF. QTY. |
| F1174-00 | 195 | 3617565-00 | CARD EDGE NOTCH FEATURE DCT 9000 II & III | SELECT IF REQUIRED. APPLICABLE FOR FACTORY INSTALLATION ONLY. | 1 |

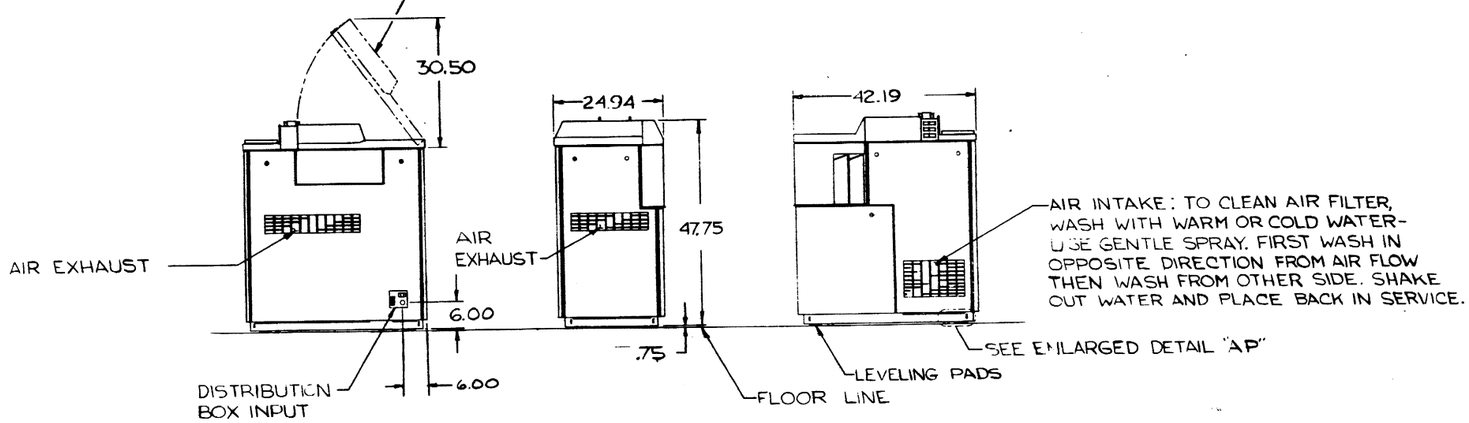
| REVISIONS (CONTROLLING PIC REV LEVEL APPEARS ON THE FIRST SHEET) | | | | | | |
|---|---|---|---|---|---|---|
| ZONE | LTR | EIR | DESCRIPTION – FOR DETAILS SEE EIR | CHK | DATE | APPROVED |
| | K | C10391-1 | SEE EIR | | | |
| | N | | | | | |
| | T | C 11418-2 | SEE EIR | | | |



DETAIL "AP"

MACHINE LEVELING ADJUSTMENT IS ACCOMPLISHED BY INSERTING AN AUTOMOTIVE BRAKE ADJUSTING TOOL, OR EQUIV THROUGH THE SLOT OPENING IN THE FRAME AND TURNING THE SPROCKET WHEEL IN THE DESIRED DIRECTION – CLOCKWISE ROTATION WILL LOWER THE FRAME AND ENGAGE THE CASTER.



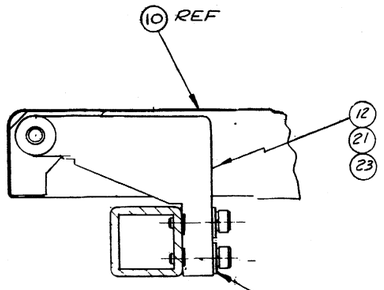




DWG NO. 3615623

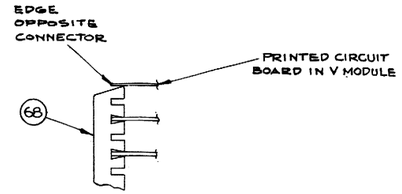
DO NOT SCALE THIS PRINT

| CLASS | UNIVAC DIVISION OF SPERRY RAND CORPORATION | |
|---|---|---|
| A | | |
| SIZE D | CODE IDENT NO. | DWG NO. 3615623 |
| SCALE NONE | WEIGHT | SHEET 2 |
| | | K M N T |

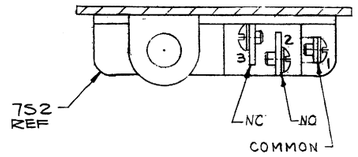
| REVISIONS (CONTROLLING PIC REV LEVEL APPEARS ON THE FIRST SHEET) | | | | | | |
|---|---|---|---|---|---|---|
| ZONE | LTR | EIR | DESCRIPTION — FOR DETAILS SEE EIR | CHK | DATE | APPROVED |
| | | | | | | |



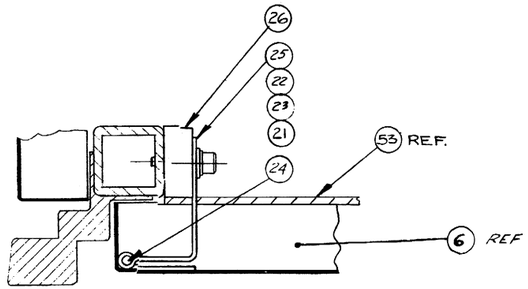

SECTION B-B
SCALE: 1/1



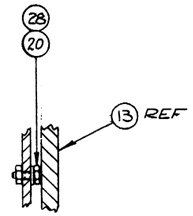

DETAIL E
SCALE 1/1



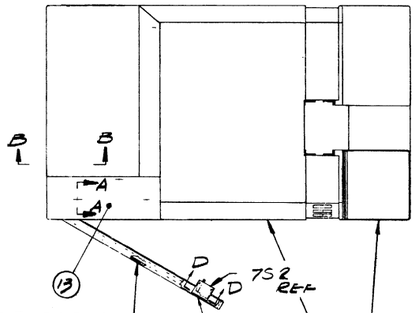

SECTION D-D
SCALE: 2/1

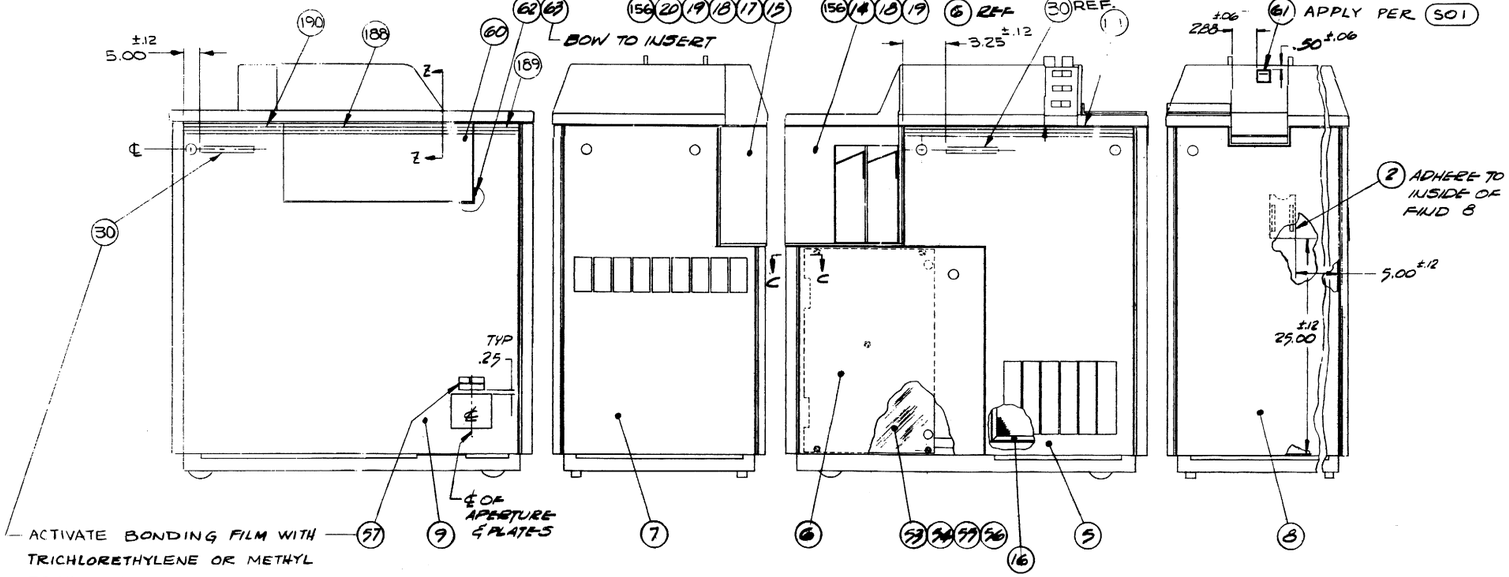


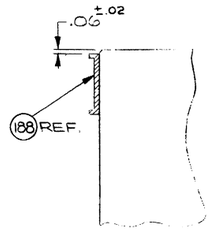

SECTION C-C
SCALE: 1/1




SECTION A-A
SCALE 1/1




SECTION Z-Z

B DWG NO. 3615623

| CLASS | UNIVAC DIVISION OF SPERRY RAND CORPORATION | |
|---|---|---|
| A | | |
| SIZE D | CODE IDENT NO. | DWG NO. 3615623 |
| SCALE 1/8 | WEIGHT | SHEET 3 |

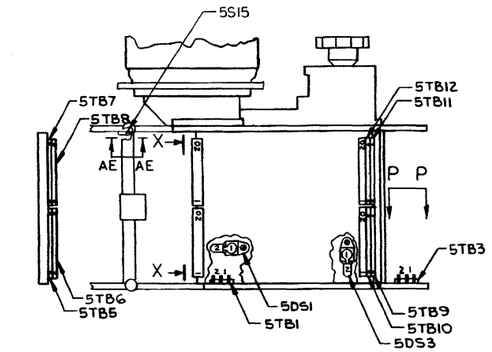
DO NOT SCALE THIS PRINT

M

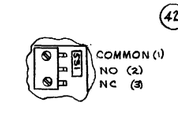
| ZONE | LTR | EIR | DESCRIPTION | CHK | DATE | APPROVED |
|---|---|---|---|---|---|---|
| | U | C11602-1 | SEE EIR | | | |

REVISIONS (CONTROLLING PIC REV LEVEL APPEARS ON THE FIRST SHEET)

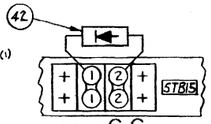
| ZONE | LTR | EIR | DESCRIPTION — FOR DETAILS SEE EIR | CHK | DATE | APPROVED |
|---|---|---|---|---|---|---|
| | D | H 18971 -2 | SEE EIR | | 8-24-61 | |
| | J | | | | | |
| | R | C11283-1 | SEE EIR | | | |
| | S | C11253-2 | SEE EIR | | | |



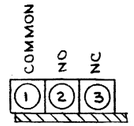

VIEW X-X VIEW F-F




VIEW AD-AD



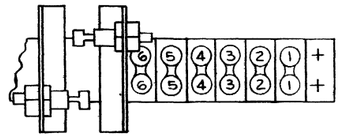

VIEW G-G



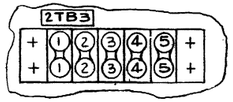

SECTION H-H

VIEW J-J

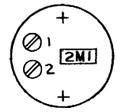
VIEW K-K



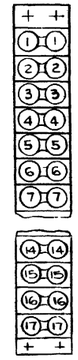

VIEW M-M



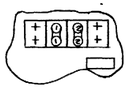

VIEW N-N




VIEW Q-Q

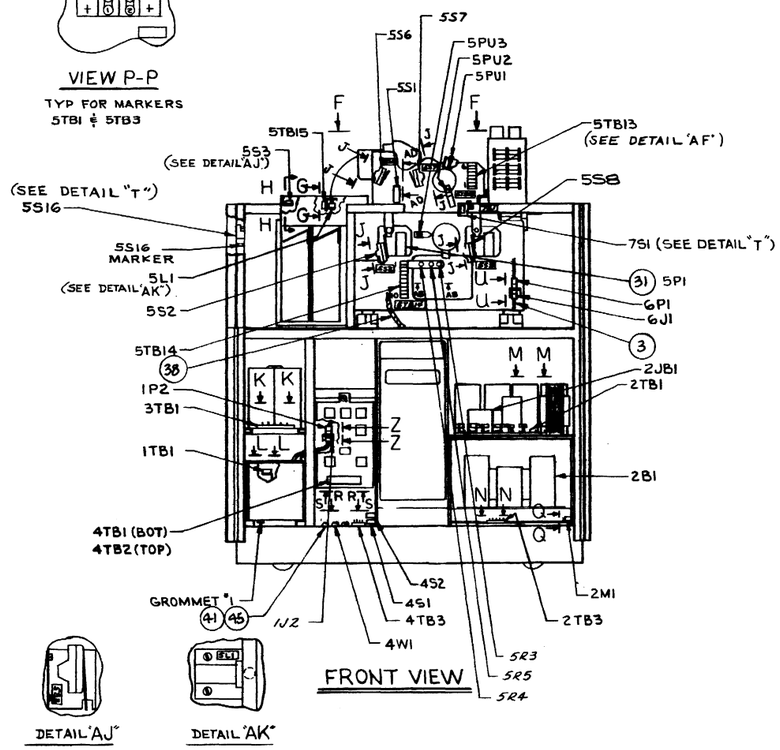



VIEW L-L



VIEW P-P

TYP FOR MARKERS 5TB1 & 5TB3



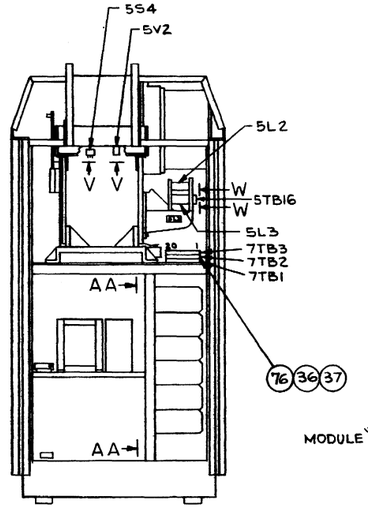

FRONT VIEW



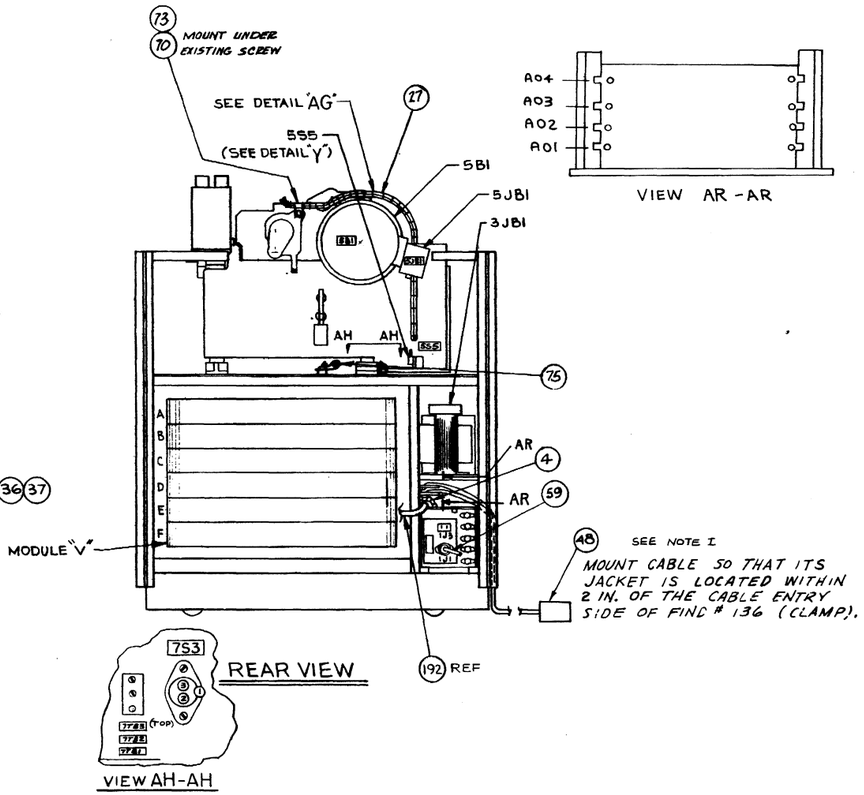
DETAIL 'AJ'



DETAIL 'AK'




END VIEW




REAR VIEW




VIEW AH-AH




VIEW AR-AR

B DWG NO. 3615623

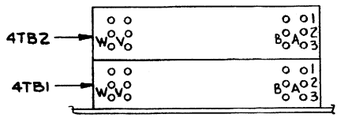
| CLASS | UNIVAC |
|---|---|
| A | DIVISION OF SPERRY RAND CORPORATION |
| SIZE D | CODE IDENT NO. / DWG NO. 3615623 |
| SCALE NONE | WEIGHT / SHEET 4 |
| | D J R S U |

DO Nnot SCALE THIS PRINT

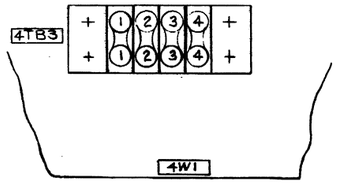
1004-487 C 11/45-153 - 66

| | | | | | |
|---|---|---|---|---|---|
| | H | 19047-1 | SEE EIR | | |

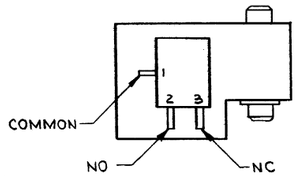
| REVISIONS (CONTROLLING PIC REV LEVEL APPEARS ON THE FIRST SHEET) | | | | | | |
|---|---|---|---|---|---|---|
| ZONE | LTR | EIR | DESCRIPTION — FOR DETAILS SEE EIR | CHK | DATE | APPROVED |
| | F | H18991-2 | SEE E.I.R. | | 10-19-67 | |
| | G | C10047-1 | SEE EIR | | | |



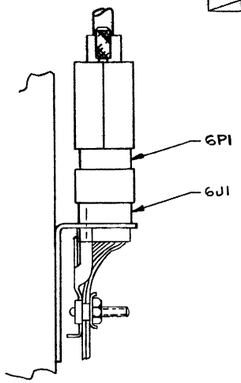

VIEW S-S



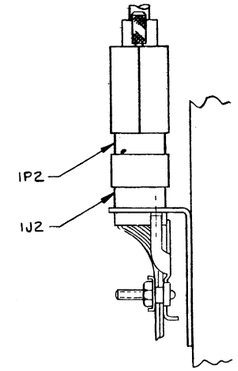

VIEW R-R



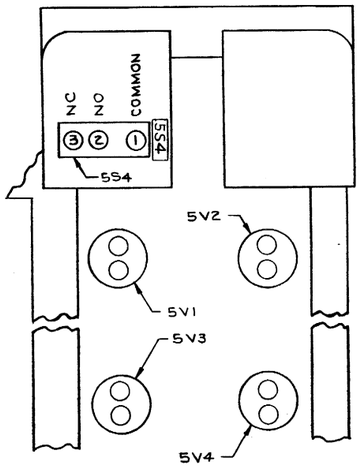

DETAIL "T"



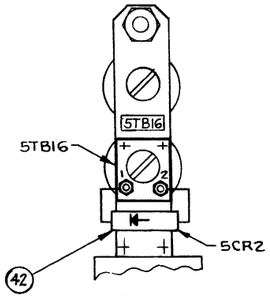

VIEW U-U



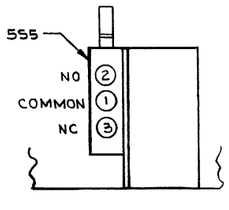

VIEW Z-Z



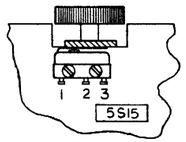

VIEW V-V



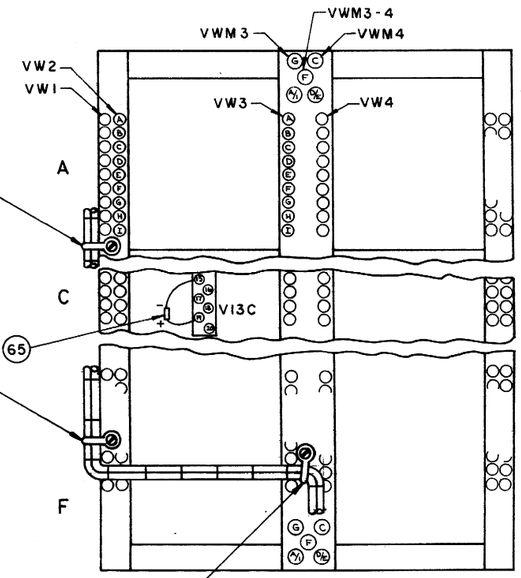

VIEW W-W



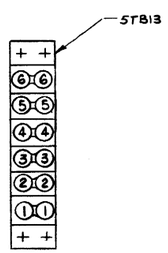

DETAIL 'Y'



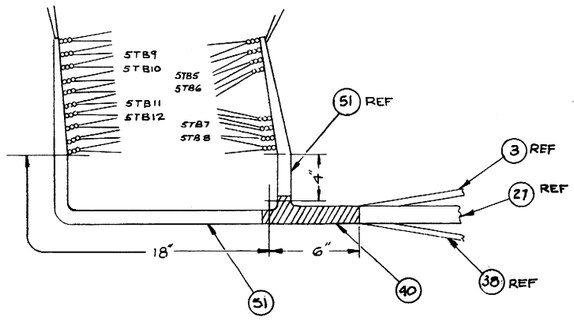

VIEW AE AE



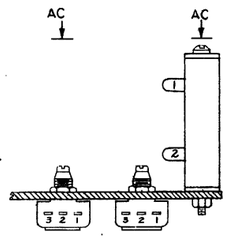

VIEW AA-AA



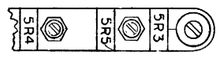

DETAIL "AF"




DETAIL "AG"




VIEW AB - AB




VIEW AC-AC

| | | | |
|---|---|---|---|
| CLASS A | UNIVAC DIVISION OF SPERRY RAND CORPORATION | | |
| SIZE D | CODE IDENT NO. | DWG NO. 3615623 | |
| SCALE NONE | WEIGHT | SHEET 5 | |

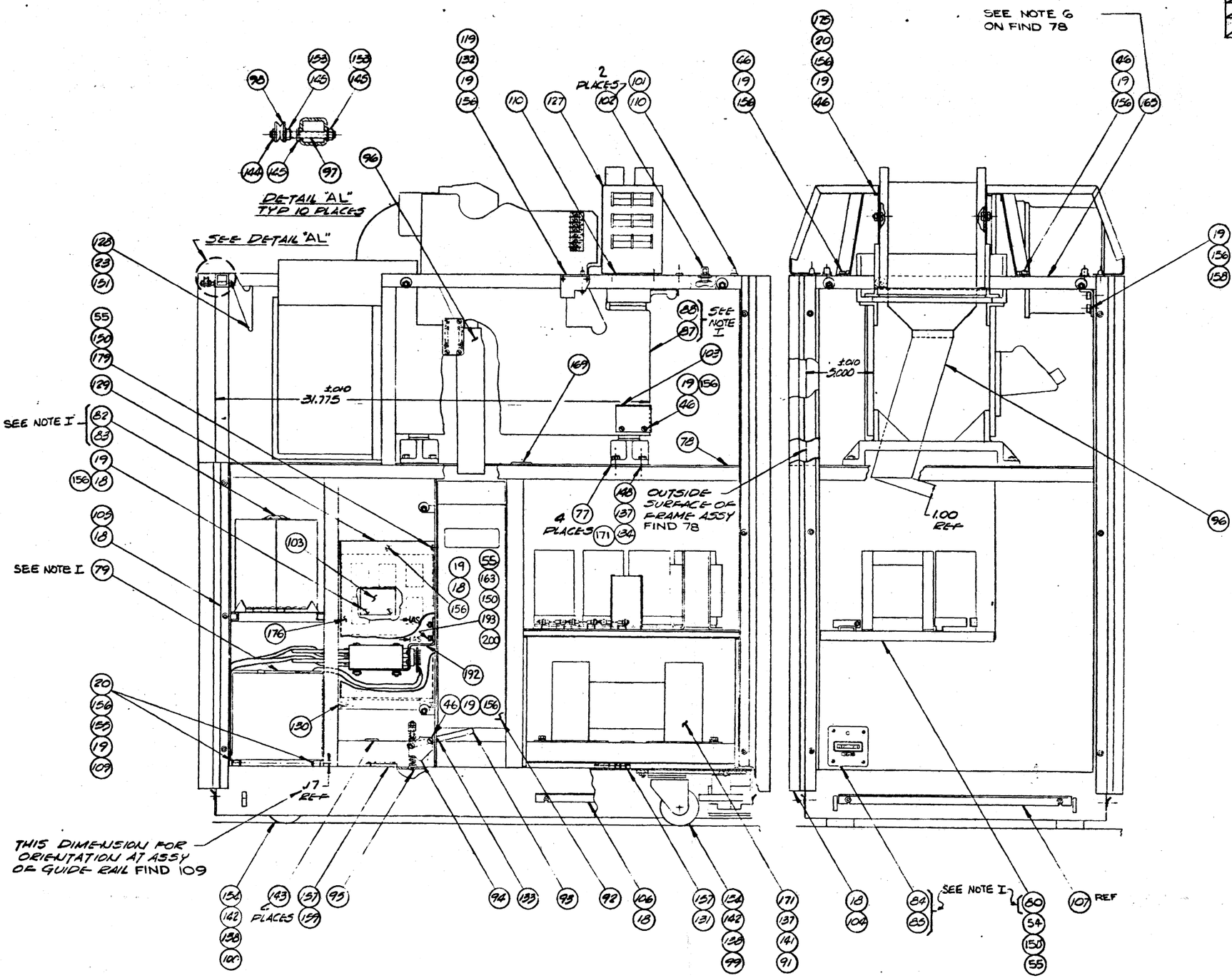
DO NOT SCALE THIS PRINT

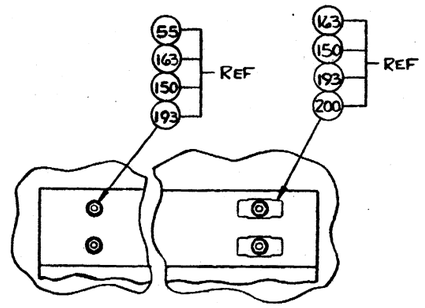
F G H

B DWG NO. 3615623

1004-487 C 11/15-132 - 68

| REVISIONS (CONTROLLING PIC. REV LEVEL APPEARS ON THE FIRST SHEET) | | | | | | |
|---|---|---|---|---|---|---|
| ZONE | | EIR | DESCRIPTION — FOR DETAILS SEE | CHK | DATE | APPROVED |
| | | | | | | |
| | R | C111283-1 | SEE EIR | | | JAE |
| | Y | C12196-1 | SEE EIR | | 4/20/70 | EEB |
| | AV | F23575-2 | SEE EIR | | 8/25/77 | RH |



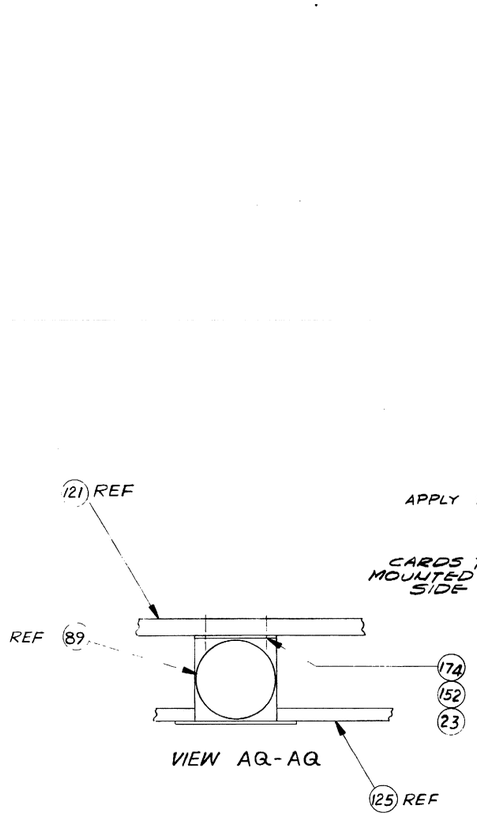



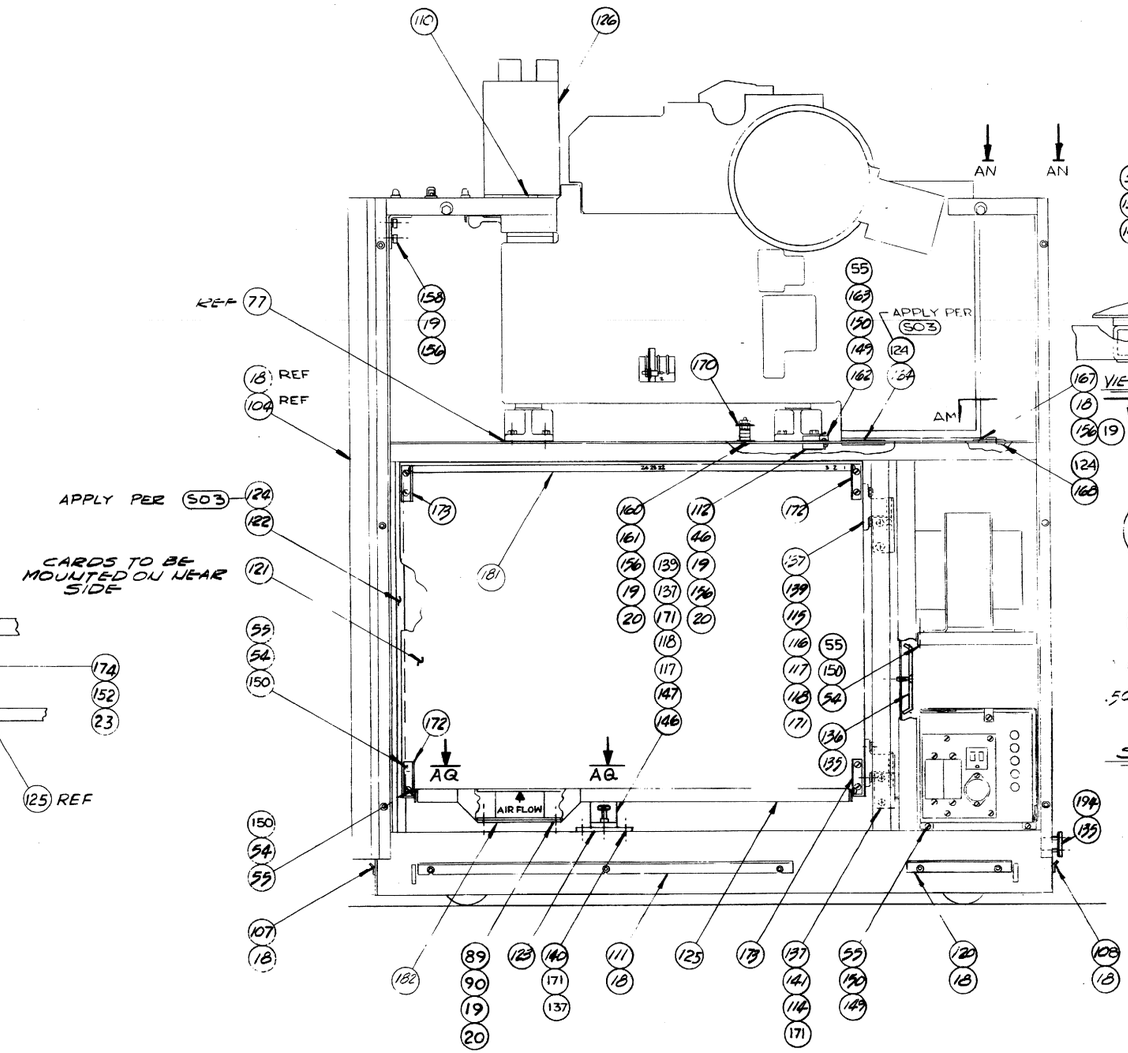

VIEW AS-AS
SCALE : NONE

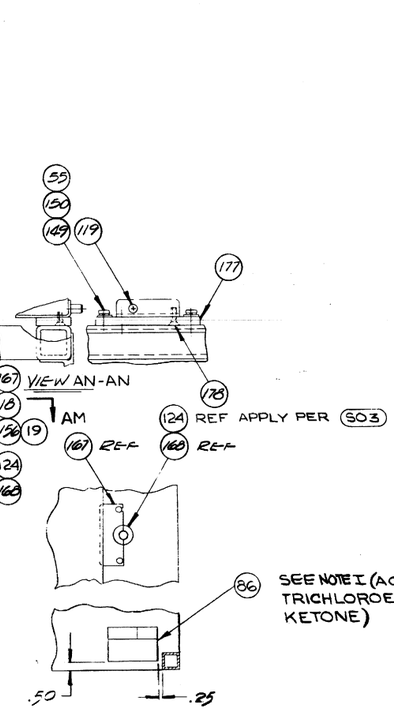
| CLASS | UNIVAC DIVISION OF SPERRY RAND CORPORATION | |
|---|---|---|
| A | | |
| SIZE D | CODE IDENT NO. | DWG NO. 3615623 |
| SCALE | WEIGHT | SHEET 6 |

DO NOT SCALE THIS PRINT

| REVISIONS | | | (CONTROLLING PIC REV LEVEL APPEARS ON THE FIRST SHEET) | | | |
|---|---|---|---|---|---|---|
| ZONE | LTR | EIR | DESCRIPTION – FOR DETAILS SEE EIR | CHK | DATE | APPROVED |
| | A | | | | | |
| | S | C112632 | SEE LTR | | | |




DWG NO. 3615623

| CLASS | UNIVAC DIVISION OF SPERRY RAND CORPORATION | | |
|---|---|---|---|
| A | | | |
| SIZE D | CODE IDENT NO. | DWG NO. 3615623 | |
| SCALE 1/2 | WEIGHT | SHEET 7 | |

DO NOT SCALE THIS PRINT

| ZONE | LTR | EIR | DESCRIPTION - FOR DETAILS SEE EIR | CHK | DATE | APPROVED |
|---|---|---|---|---|---|---|
| | R | C11283-1 | SEE EIR | | | |

REVISIONS (CONTROLLING PIC REV LEVEL APPEARS ON THE FIRST SHEET)

| ZONE | LTR | EIR | DESCRIPTION - FOR DETAILS SEE EIR | CHK | DATE | APPROVED |
|---|---|---|---|---|---|---|
| | A | HI8391-1 | SEE EIR | | | |
| | C | HI8668-1 | SEE EIR | | 6-26-67 | |
| | F | HI8991-2 | SEE EIR | | 10-19-67 | |
| | K | C10391-1 | SEE EIR | | | |

CONT. ZONE D-3

1TB1

3JB1

1TB1-17 *14 BK
1TB1-16 *14 WH

FIND NO. (43)
FIND NO. (43)
3TI-BK
3TI-BK

4W1

GROMMET*1

4TB3

4TB1-R2
4TB1-S2
4TB1-Y2
7S2-1
7S2-3
6J1-28

YW BK BL YW BK BK

4S1-1
4S2-1
4S2-1
4S2-2

4S1

4TB3-1
4TB3-2

4S2

4TB3-3
4TB3-4

5S1

7TB2-20 YW
7TB2-19 BK

5S7

5S15-2 VT.
5S6-2 GN

5S6

5S7-1 GN
7S1-1 RD

5S2

5S15-1 BN
5S16-2 YW

WH *14 2TB3-4
BK *14 2TB3-5

BK *14 5JB1
WH *14 5JB1
WH *14 2JB1
WH *14 3JB1
BK *14 2JB1
BK *14 3JB1

CABLE DWG 5013800-00

2JB1

FIND NO. (43)
FIND NO. (43)
2TI-BK
2TI-BK

1TB1-15 *14 WH
1TB1-17 *14 BK
2MI-1 BLK
2MI-2 WHT

3TB1

VWM3A-A/1 *10 BLK
4TB2-W2 BK
4TB2-U2 YW
VWN1A-B *10 WH

2TB1

WH-BN
IP2-39 BK
VWM3F-A/E *10 BL
VWM4F-D/E *10 BN
VWM4F-C *10 VT
4TB2-J1 #10 RED
VWM3F-G

7TB1-20
7TB1-19

5CR2

5TB16

YW BK

5S3

5S5-1 BL
4TB2-G1 GN

7S1

4TB2-C1 RD
5S6-1 OR

5S15

5S2-2 BN
5S7-2 VT.

GROMMET *1
4W1-1

2MI

2JB1 BLK
2JB1 WHT

2TB3-5 #18BK
2TB3-4 #18WH

WH-RD 6J1-36
WH-BL 6J1-37
WH#18 VB1-2
WH#14 1TB1-9
BK #14 1TB1-10
BK#18 VB1-1

5JB1

(186) (185) SRC (186)
(43) (43)
5BI-T1
5BI-T2

BK #14 1TB1-13
WH #14 1TB1-14

2B1

FOR LOCATION SEE 5026618
2S1

RD BL YL WH BK

2TB3-1
2TB3-2
2TB3-3
2TB3-4
2TB3-5

2TB3

2SI-RD
2SI-BL
2SI-YEL
2BI-WH
2BI-BK

7S2

4TB3-4 BK
4TB3-3 YW

4TB2-F1 WH
5S4-1 BL
5S3-1 BL

5S4

VT BL BL

4TB2-E1
4TB1-W3
5S5-1

5S3

5S5

7TB2-1
7TB2-2

BK YW

5CR3

5TB15

CABLE DWG 3615616-00

DWG NO. 3615623

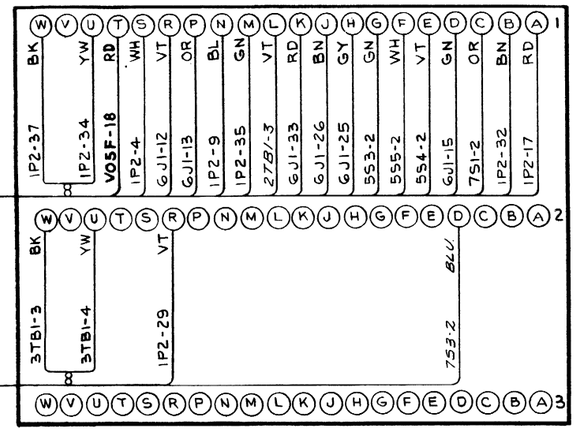
| CLASS | UNIVAC |
|---|---|
| A | DIVISION OF SPERRY RAND CORPORATION |
| SIZE D | CODE IDENT NO. |
| | DWG NO. 3615623 |
| SCALE | WEIGHT |
| | SHEET 8 |

DO NOT SCALE THIS PRINT

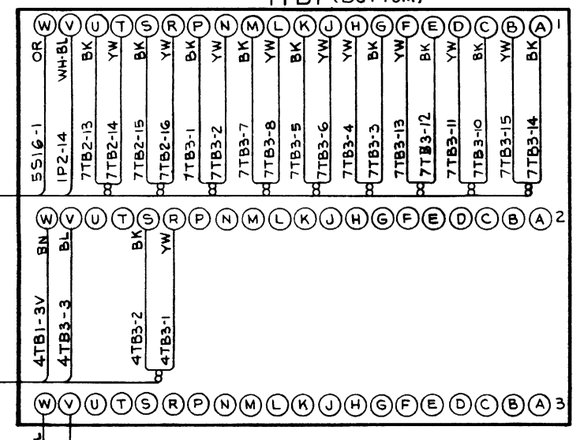
A C F K R

| REVISIONS (CONTROLLING PIC REV LEVEL APPEARS ON THE FIRST SHEET) | | | | | | |
|---|---|---|---|---|---|---|
| ZONE | LTR | EIR | DESCRIPTION – FOR DETAILS SEE EIR | CHK | DATE | APPROVED |
| | C | H18668-1 | SEE EIR | [illegible] | 6-26-67 | H.E.J. |
| | F | H18991-2 | SEE EIR | [illegible] | 10-19-67 | H.E.J. |
| | J | H19601-3 C | SEE EIR | " | " | " |
| | K | 10391-1 | SEE EIR | " | " | " |

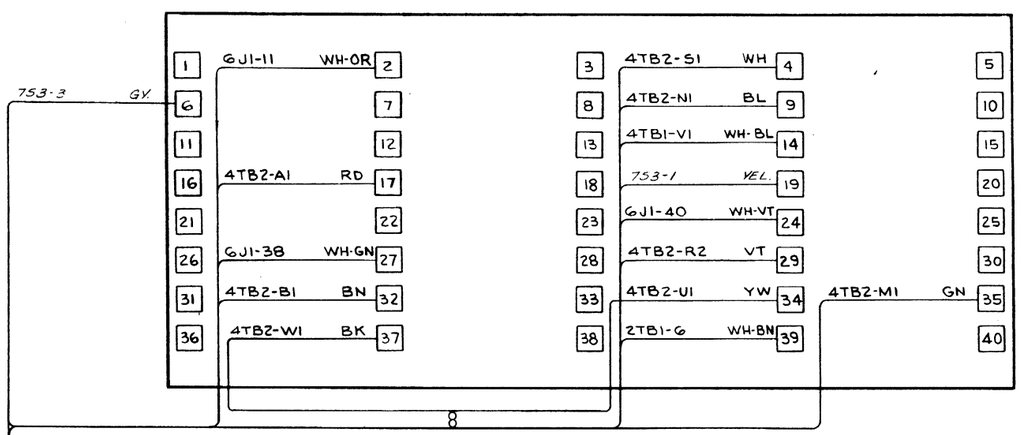
## 4TB2 (TOP)



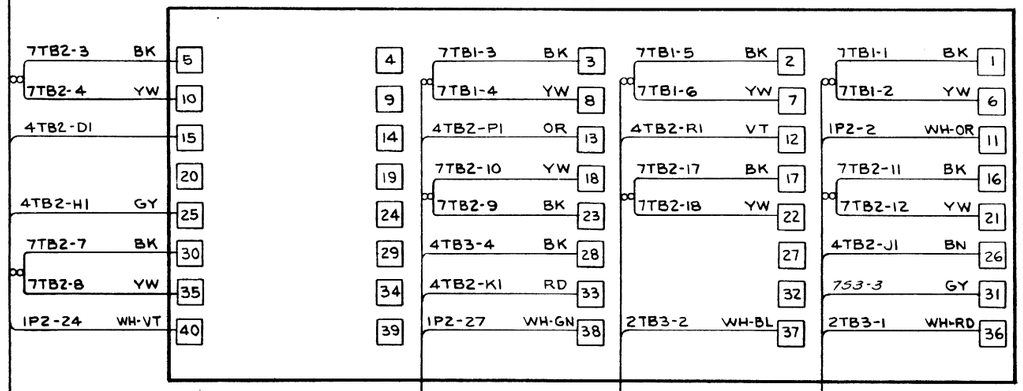

## 4TB1 (BOTTOM)




## 1P2




## 6J1




CABLE DWG 3615616-00

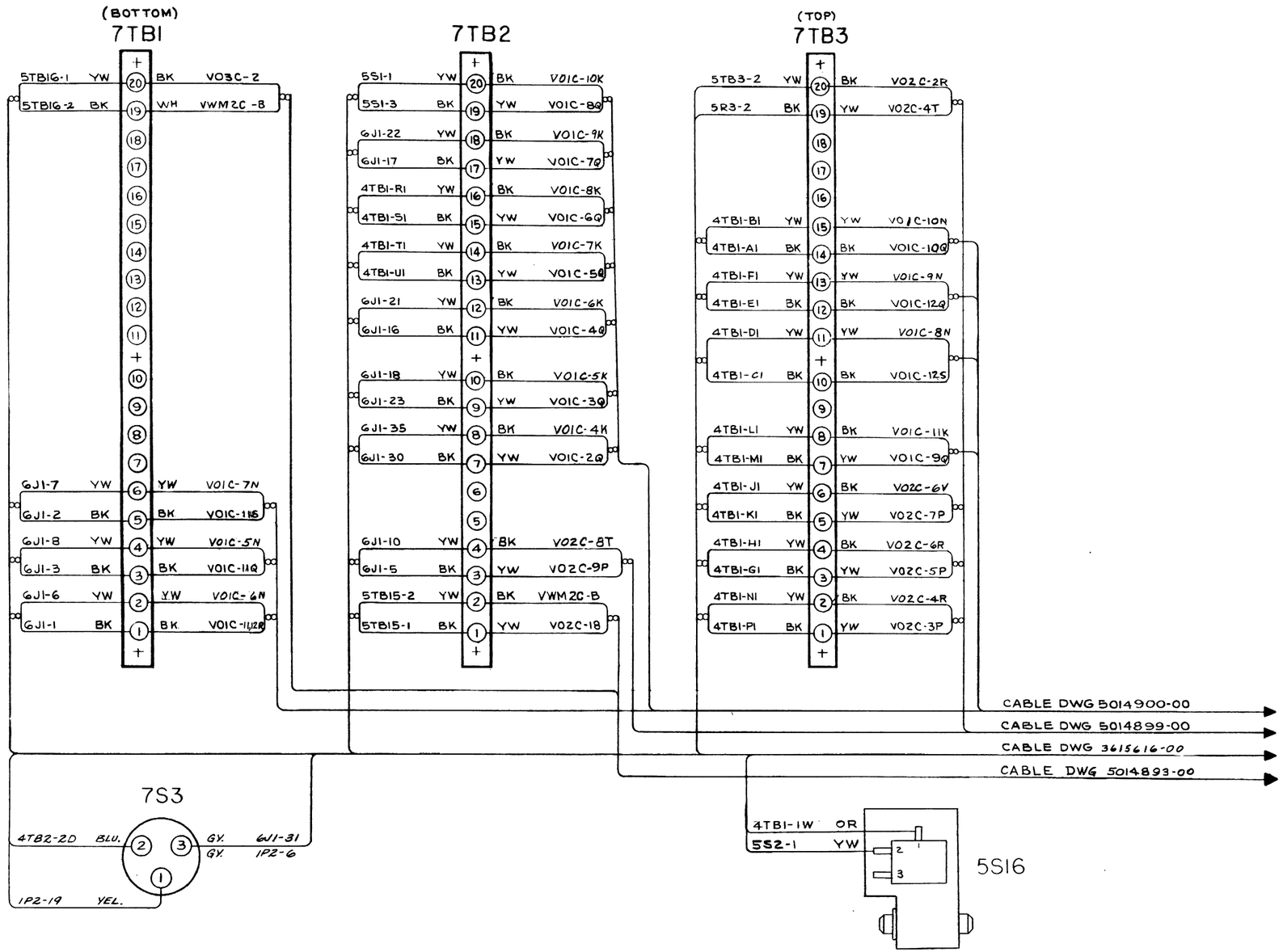
DWG NO. 3615623

| CLASS | UNIVAC DIVISION OF SPERRY RAND CORPORATION | |
|---|---|---|
| A | | |
| SIZE | CODE IDENT NO. | DWG NO. |
| D | | 3615623 |
| SCALE | WEIGHT | SHEET 9 |

DO NOT SCALE THIS PRINT

B C F J M

| REVISIONS (CONTROLLING PIC REV LEVEL APPEARS ON THE FIRST SHEET) | | | | | | |
|---|---|---|---|---|---|---|
| ZONE | LTR | EIR | DESCRIPTION — FOR DETAILS SEE EIR | CHK | DATE | APPROVED |

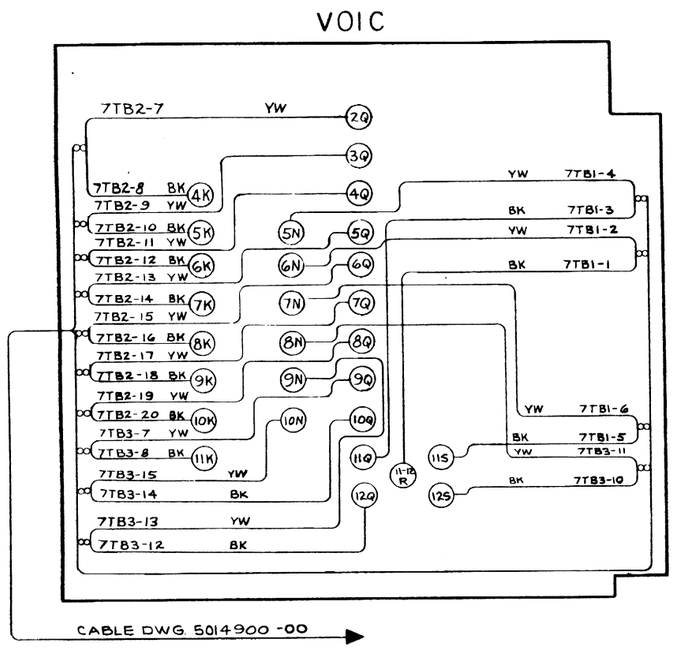


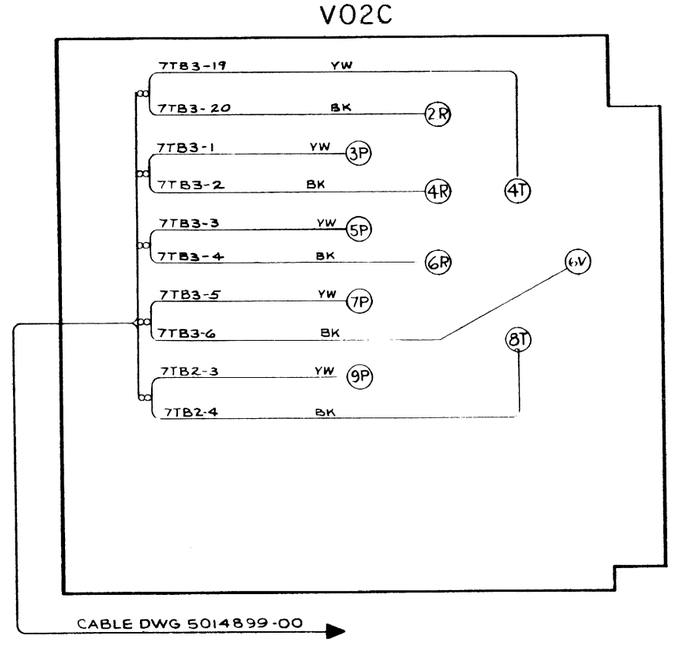

DWG NO. 3615623

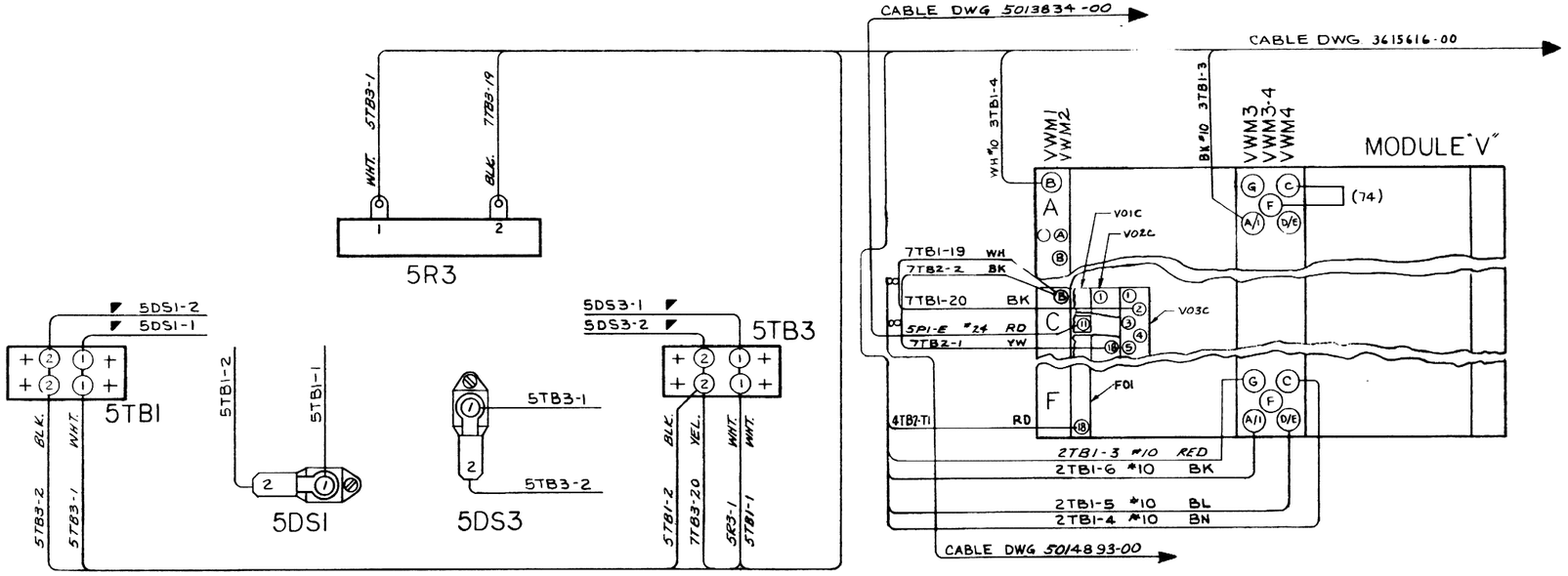
| CLASS | UNIVAC DIVISION OF SPERRY RAND CORPORATION | |
|---|---|---|
| A | | |
| SIZE D | CODE IDENT NO. | DWG NO. 3615623 |
| SCALE | WEIGHT | SHEET 10 |

DO NOT SCALE THIS PRINT

| REVISIONS (CONTROLLING PIC REV LEVEL APPEARS ON THE FIRST SHEET) | | | | | | |
|---|---|---|---|---|---|---|
| ZONE | LTR | EIR | DESCRIPTION – FOR DETAILS SEE EIR | CHK | DATE | APPROVED |



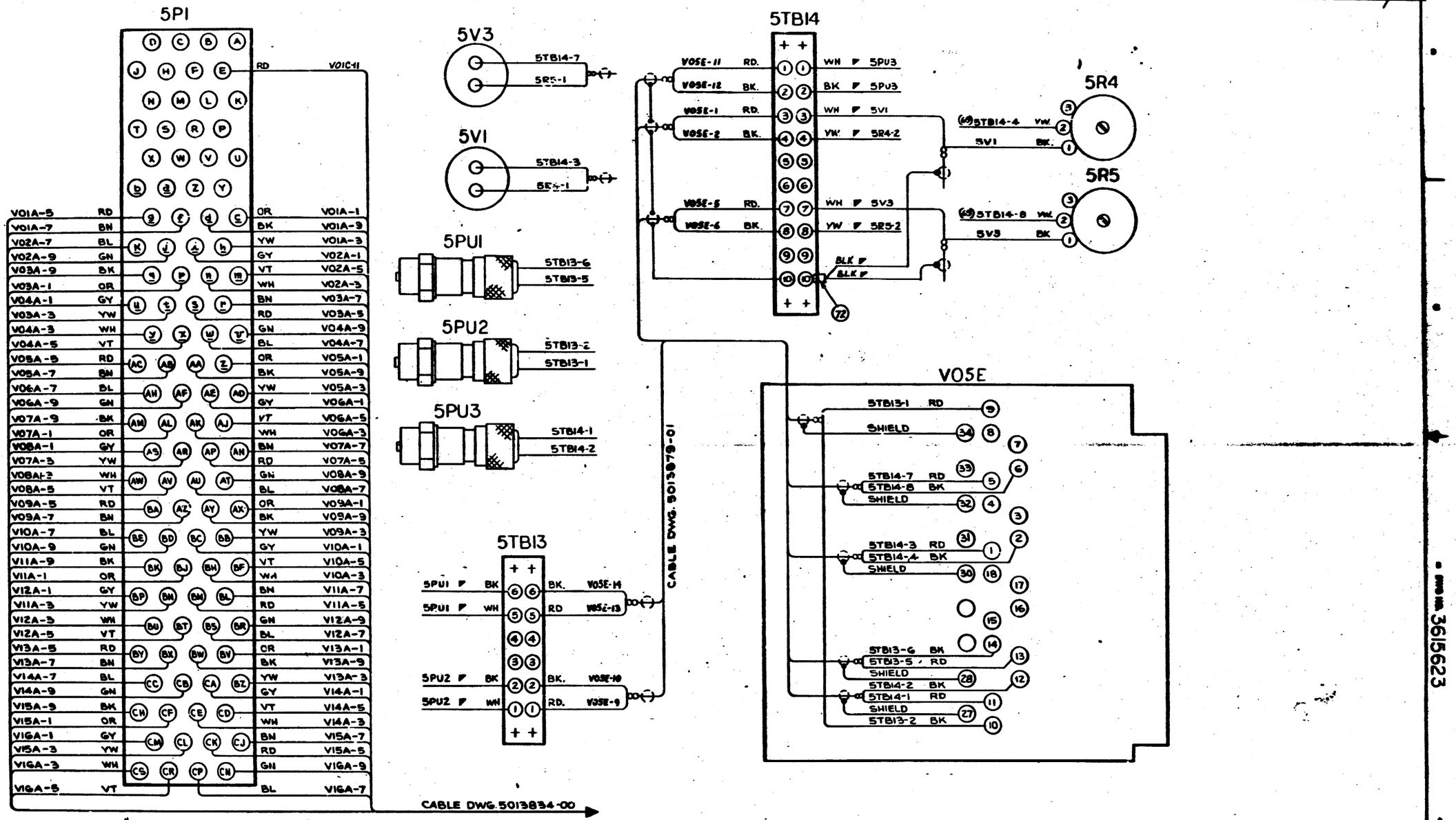




DWG NO. 3615623

| CLASS | UNIVAC DIVISION OF SPERRY RAND CORPORATION | |
|---|---|---|
| A | | |
| SIZE D | CODE IDENT NO. | DWG NO. 3615623 |
| SCALE | WEIGHT | SHEET 11 |

DO NOT SCALE THIS PRINT

| REVISIONS | | | | | | |
|---|---|---|---|---|---|---|
| ZONE | LTR | EIR | DESCRIPTION – FOR DETAILS SEE EIR | CHK | DATE | APPROVED |
| | R | C. 283-1 | SEE EIR | | | |
| | AR | 1S1886-11 | SEE EIR | | | |



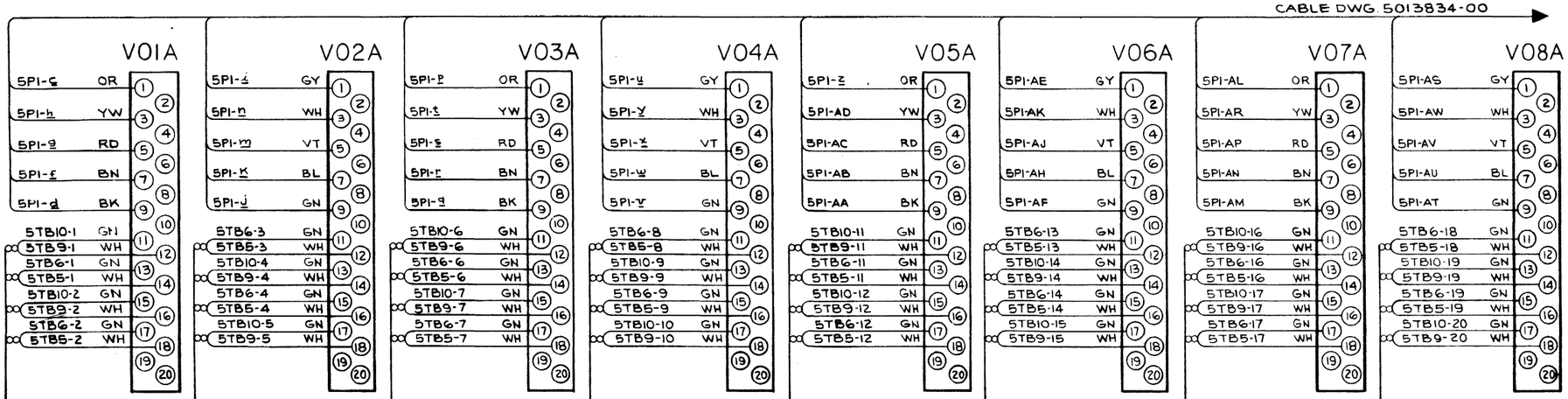

| CLASS | UNIVAC |
|---|---|
| A | DIVISION OF SPERRY RAND CORPORATION |
| SIZE D | CODE IDENT NO. / DWG NO. 3615623 |
| SCALE | WEIGHT / SHEET 12 |

DO NOT SCALE THIS PRINT

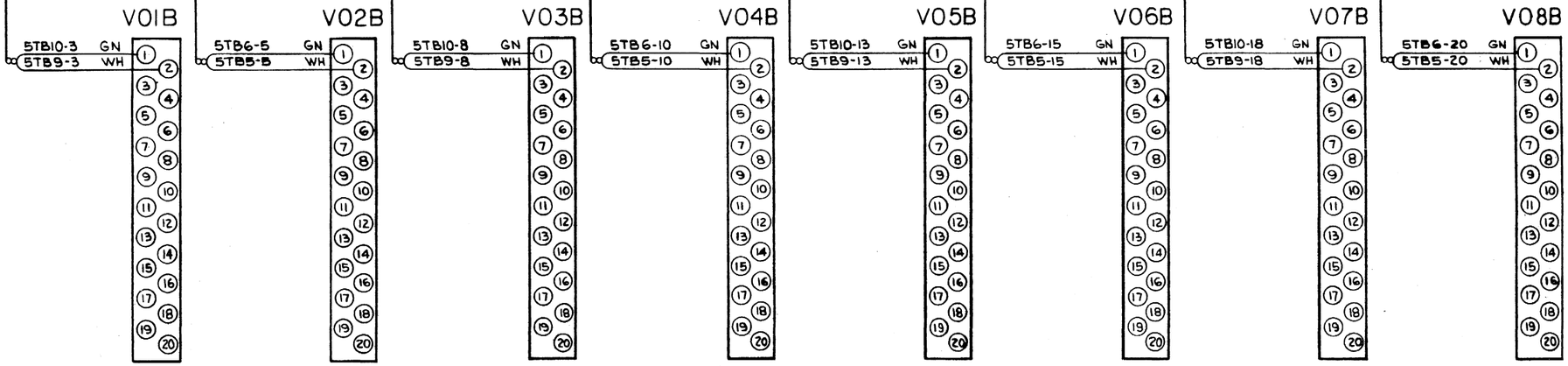
3615623

| REVISIONS (CONTROLLING PIC REV LEVEL APPEARS ON THE FIRST SHEET) | | | | | | |
|---|---|---|---|---|---|---|
| ZONE | LTR | EIR | DESCRIPTION — FOR DETAILS SEE EIR | CHK | DATE | APPROVED |

CABLE DWG 5013834-00




CABLE DWG.
5013847-00



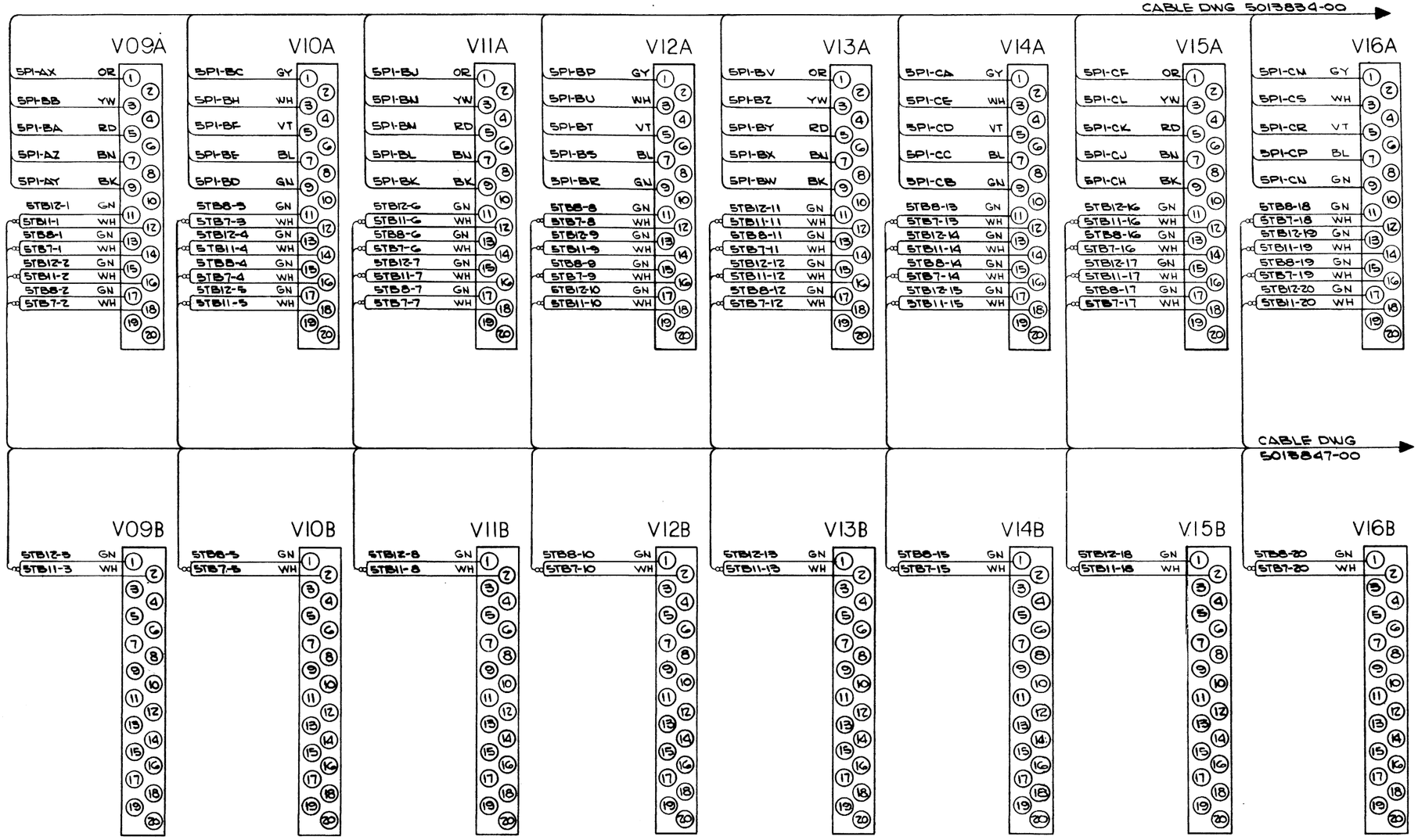

DWG NO. 3615623

| CLASS | UNIVAC |
|---|---|
| A | DIVISION OF SPERRY RAND CORPORATION |
| SIZE D | CODE IDENT NO. |
| DWG NO. 3615623 | |
| SCALE | WEIGHT |
| SHEET 13 | |

DO NOT SCALE THIS PRINT

| REVISIONS (CONTROLLING PIC REV LEVEL APPEARS ON THE FIRST SHEET) | | | | | | |
|---|---|---|---|---|---|---|
| ZONE | LTR | EIR | DESCRIPTION – FOR DETAILS SEE EIR | CHK | DATE | APPROVED |

CABLE DWG 5013834-00




CABLE DWG 5013847-00




DWG NO. 3615623

| CLASS | UNIVAC DIVISION OF SPERRY RAND CORPORATION | |
|---|---|---|
| A | | |
| SIZE D | CODE IDENT NO. | DWG NO. 3615623 |
| SCALE | WEIGHT | SHEET 1# |

DO NOT SCALE THIS PRINT

| REVISIONS (CONTROLLING PIC REV LEVEL APPEARS ON THE FIRST SHEET) | | | | | | |
|---|---|---|---|---|---|---|
| ZONE | LTR | EIR | DESCRIPTION — FOR DETAILS SEE EIR | CHK | DATE | APPROVED |

CABLE DWG. 5013847-00

## 5TB5 (TOP) 5TB6

| | | | | | |
|---|---|---|---|---|---|
| V08B-2 | WH | + | 20 | 20 | + |
| V08B-1 | GN | | | | |
| V08A-16 | WH | | 19 | 19 | |
| V08A-15 | GN | | | | |
| V08A-12 | WH | | 18 | 18 | |
| V08A-11 | GN | | | | |
| V07A-18 | WH | | 17 | 17 | |
| V07A-17 | GN | | | | |
| V07A-14 | WH | | 16 | 16 | |
| V07A-13 | GN | | | | |
| V06B-2 | WH | | 15 | 15 | |
| V06B-1 | GN | | | | |
| V06A-16 | WH | | 14 | 14 | |
| V06A-15 | GN | | | | |
| V06A-12 | WH | | 13 | 13 | |
| V06A-11 | GN | | | | |
| V05A-18 | WH | | 12 | 12 | |
| V05A-17 | GN | | | | |
| V05A-14 | WH | | 11 | 11 | |
| V05A-13 | GN | | | | |
| | | + | | | + |
| V04B-2 | WH | | 10 | 10 | |
| V04B-1 | GN | | | | |
| V04A-16 | WH | | 9 | 9 | |
| V04A-15 | GN | | | | |
| V04A-12 | WH | | 8 | 8 | |
| V04A-11 | GN | | | | |
| V03A-18 | WH | | 7 | 7 | |
| V03A-17 | GN | | | | |
| V03A-14 | WH | | 6 | 6 | |
| V03A-13 | GN | | | | |
| V02B-2 | WH | | 5 | 5 | |
| V02B-1 | GN | | | | |
| V02A-16 | WH | | 4 | 4 | |
| V02A-15 | GN | | | | |
| V02A-12 | WH | | 3 | 3 | |
| V02A-11 | GN | | | | |
| V01A-18 | WH | | 2 | 2 | |
| V01A-17 | GN | | | | |
| V01A-14 | WH | | 1 | 1 | |
| V01A-13 | GN | + | | | + |

## 5TB7 (TOP) 5TB8

| | | | | | |
|---|---|---|---|---|---|
| V16B-2 | WH | + | 20 | 20 | + |
| V16B-1 | GN | | | | |
| V16A-16 | WH | | 19 | 19 | |
| V16A-15 | GN | | | | |
| V16A-12 | WH | | 18 | 18 | |
| V16A-11 | GN | | | | |
| V15A-18 | WH | | 17 | 17 | |
| V15A-17 | GN | | | | |
| V15A-14 | WH | | 16 | 16 | |
| V15A-13 | GN | | | | |
| V14B-2 | WH | | 15 | 15 | |
| V14B-1 | GN | | | | |
| V14A-16 | WH | | 14 | 14 | |
| V14A 15 | GN | | | | |
| V14A-12 | WH | | 13 | 13 | |
| V14A-11 | GN | | | | |
| V13A-18 | WH | | 12 | 12 | |
| V13A-17 | GN | | | | |
| V13A-14 | WH | | 11 | 11 | |
| V13A-13 | GN | | | | |
| | | + | | | + |
| V12B-2 | WH | | 10 | 10 | |
| V12B-1 | GN | | | | |
| V12A-16 | WH | | 9 | 9 | |
| V12A-15 | GN | | | | |
| V12A-12 | WH | | 8 | 8 | |
| V12A-11 | GN | | | | |
| V11A-18 | WH | | 7 | 7 | |
| V11A-17 | GN | | | | |
| V11A-14 | WH | | 6 | 6 | |
| V11A-13 | GN | | | | |
| V10B-2 | WH | | 5 | 5 | |
| V10B-1 | GN | | | | |
| V10A-16 | WH | | 4 | 4 | |
| V10A-15 | GN | | | | |
| V10A-12 | WH | | 3 | 3 | |
| V10A-11 | GN | | | | |
| V09A-18 | WH | | 2 | 2 | |
| V09A-17 | GN | | | | |
| V09A-14 | WH | | 1 | 1 | |
| V09A-13 | GN | + | | | + |

## 5TBI2 (TOP) 5TBII

| | | | | | |
|---|---|---|---|---|---|
| + | + | | | WH | V16A-18 |
| 20 | 20 | | | GN | V16A-17 |
| 19 | 19 | | | WH | V16A-14 |
| | | | | GN | V16A-13 |
| 18 | 18 | | | WH | V15B-2 |
| | | | | GN | V15B-1 |
| 17 | 17 | | | WH | V15A-16 |
| | | | | GN | V15A-15 |
| 16 | 16 | | | WH | V15A-12 |
| | | | | GN | V15A-11 |
| 15 | 15 | | | WH | V14A-18 |
| | | | | GN | V14A-17 |
| 14 | 14 | | | WH | V14A-14 |
| | | | | GN | V14A-13 |
| 13 | 13 | | | WH | V13B-2 |
| | | | | GN | V13B-1 |
| 12 | 12 | | | WH | V13A-16 |
| | | | | GN | V13A-15 |
| 11 | 11 | | | WH | V13A-12 |
| | | | | GN | V13A-11 |
| + | + | | | | |
| 10 | 10 | | | WH | V12A-18 |
| | | | | GN | V12A-17 |
| 9 | 9 | | | WH | V12A-14 |
| | | | | GN | V12A-13 |
| 8 | 8 | | | WH | V11B-2 |
| | | | | GN | V11B-1 |
| 7 | 7 | | | WH | V11A-16 |
| | | | | GN | V11A-15 |
| 6 | 6 | | | WH | V11A-12 |
| | | | | GN | V11A-11 |
| 5 | 5 | | | WH | V10A-18 |
| | | | | GN | V10A-17 |
| 4 | 4 | | | WH | V10A-14 |
| | | | | GN | V10A-13 |
| 3 | 3 | | | WH | V09B-2 |
| | | | | GN | V09B-1 |
| 2 | 2 | | | WH | V09A-16 |
| | | | | GN | V09A-15 |
| 1 | 1 | | | WH | V09A-12 |
| | | | | GN | V09A-11 |
| + | + | | | | |

## 5TBI0 (TOP) 5TB9

| | | | | | |
|---|---|---|---|---|---|
| + | + | | | WH | V08A-18 |
| 20 | 20 | | | GN | V08A-17 |
| 19 | 19 | | | WH | V08A-14 |
| | | | | GN | V08A-13 |
| 18 | 18 | | | WH | V07B-2 |
| | | | | GN | V07B-1 |
| 17 | 17 | | | WH | V07A-16 |
| | | | | GN | V07A-15 |
| 16 | 16 | | | WH | V07A-12 |
| | | | | GN | V07A-11 |
| 15 | 15 | | | WH | V06A-18 |
| | | | | GN | V06A-17 |
| 14 | 14 | | | WH | V06A-14 |
| | | | | GN | V06A-13 |
| 13 | 13 | | | WH | V05B-2 |
| | | | | GN | V05B-1 |
| 12 | 12 | | | WH | V05A-16 |
| | | | | GN | V05A-15 |
| 11 | 11 | | | WH | V05A-12 |
| | | | | GN | V05A-11 |
| + | + | | | | |
| 10 | 10 | | | WH | V04A-18 |
| | | | | GN | V04A-17 |
| 9 | 9 | | | WH | V04A-14 |
| | | | | GN | V04A-13 |
| 8 | 8 | | | WH | V03B-2 |
| | | | | GN | V03B-1 |
| 7 | 7 | | | WH | V03A-16 |
| | | | | GN | V03A-15 |
| 6 | 6 | | | WH | V03A-12 |
| | | | | GN | V03A-11 |
| 5 | 5 | | | WH | V02A-18 |
| | | | | GN | V02A-17 |
| 4 | 4 | | | WH | V02A-14 |
| | | | | GN | V02A-13 |
| 3 | 3 | | | WH | V01B-2 |
| | | | | GN | V01B-1 |
| 2 | 2 | | | WH | V01A-16 |
| | | | | GN | V01A-15 |
| 1 | 1 | | | WH | V01A-12 |
| | | | | GN | V01A-11 |
| + | + | | | | |

DWG NO. 3615623

| CLASS | UNIVAC DIVISION OF SPERRY RAND CORPORATION | |
|---|---|---|
| A | | |
| SIZE | CODE IDENT NO. | DWG NO. |
| D | | 3615623 |
| SCALE | WEIGHT | SHEET 15 |

DO NOT SCALE THIS PRINT

PARTS LIST | UNIVAC | SPERRY RAND CORPORATION | CODE IDENT 92120 | ISSUE DATE 01/02/70 | CONTROL C 25 | CA | TYPE M | COMM CODE | ST A | PL | DWG NO 3615623 | SHEET 1 | PL REV W

TITLE OF DRAWING FROM WHICH DETACHED: INTERFACE CONTROL ASSY, 80 COLROW PUNCH TYPE 0604-008-01 | CL A | U/M EA | 15 | DWG SIZE D | RANGE On 99 THRU | ISSUE 1 | PIC REV U

| FIND NO | QUANTITY REQUIRED | U/M | | PART OR IDENT NO DRAWING NO | DASH | NOMENCLATURE OR DESCRIPTION | | S P | C H G |
|---|---|---|---|---|---|---|---|---|---|
| 1 | * | | | | | SEE VARIABLE DATA BELOW | | | |
| 2 | 1 | EA | C | 3005220 | -00 | HOLDER, TABULATING CARD | | | |
| 3 | 1 | EA | D | 3615616 | -00 | MAIN HARNESS - 80 COLUMN | | | |
| 4 | 1 | EA | D | 5013800 | -00 | HARNESS PRIMARY POWER | | | |
| 5 | 1 | EA | D | 5012715 | -07 | PANEL ASSEMBLY - INTAKE | PRIMED | | |
| 6 | 1 | EA | D | 5012862 | -07 | PANEL ASSEMBLY - CHIPBOX | PRIMED | | |
| 7 | 1 | EA | D | 5012878 | -06 | PANEL ASSY, LEFT | AS IS PRIMED | | |
| 8 | 1 | EA | D | 5013076 | -06 | PANEL ASSEMBLY - RIGHT | AS IS PRIMED | | |
| 9 | 1 | EA | D | 5018252 | -07 | PANEL ASSEMBLY - REAR | PRIMED | | |
| 10 | 1 | EA | D | 5013035 | -04 | TOP COVER ASSEMBLY | PRIMED | | |
| 11 | 1 | EA | C | 5013065 | -04 | ENCLOSURE, INPUT - ASSY | PRIMED | | |
| 12 | 2 | EA | B | 5013019 | -00 | HINGE ASSEMBLY | | | |
| 13 | 1 | EA | B | 5013398 | -00 | SHELF ASSY, STACKER | | | |
| 14 | 1 | EA | C | 5012723 | -04 | TRIM PLATE ASSY - FRONT | PRIMER COATING | | |
| 15 | 1 | EA | C | 5012724 | -04 | TRIM PLATE ASSEMBLY - SIDE | PRIMER COATING | | |
| 16 | 1 | EA | B | 5012679 | -00 | FILTER,AIR INTAKE | | | |
| 17 | 1 | EA | A | 4912524 | -03 | SCREW MACH-PAN HD SLOT. CRES | 0.438 LG 6-32 UNC-2A | | |
| 18 | 47 | EA | A | 4912524 | -00 | SCREW MACH-PAN HD SLOT. CRES | 0.250 LG 6-32 UNC-2A | | |
| 19 | 45 | EA | C | 4912550 | -01 | WASHER LOCK (SPRING) HELICAL | NO. 6 | | |
| 20 | 26 | EA | C | 4912540 | -01 | NUT,PLAIN,HEXAGON-MACHINE | NO. 6-32 UNC THD CRES | | |



PARTS LIST | UNIVAC | SPERRY RAND CORPORATION | CODE IDENT 92120 | ISSUE DATE 01/02/70 | CONTROL C 25 | CA | TYPE M | COMM CODE | ST A | PL | DWG NO 3615623 | SHEET 2 | PL REV W

TITLE OF DRAWING FROM WHICH DETACHED: INTERFACE CONTROL ASSY, 80 COLROW PUNCH TYPE 0604-008-01 | CL A | U/M EA | 15 | DWG SIZE D | RANGE On 99 THRU | ISSUE 1 | PIC REV U

| FIND NO | QUANTITY REQUIRED | U/M | | PART OR IDENT NO DRAWING NO | DASH | NOMENCLATURE OR DESCRIPTION | | S P | C H G |
|---|---|---|---|---|---|---|---|---|---|
| 21 | 10 | EA | C | 4912851 | -04 | SCREW CAP SOC HD 10-32 UNF-3A | 1.000 LG MIN THD LG FULL | | |
| 22 | 14 | EA | C | 4912548 | -03 | WASHER, FLAT - ROUND | NO. 10 | | |
| 23 | 15 | EA | C | 4912550 | -03 | WASHER LOCK (SPRING) HELICAL | NO. 10 | | |
| 24 | 2 | EA | B | 5014670 | -00 | PIN, HINGE | PART VARIES UNDER EACH HEADER | | |
| 25 | 2 | EA | B | 5014671 | -00 | WING, LARGE - HINGE | | | |
| 26 | 2 | EA | B | 5013384 | -00 | HINGE-SPACER | | | |
| 27 | 1 | EA | E | 5013847 | -00 | WIRING HARNESS, BRANCHED - | INTERPOSER | | |
| 28 | 3 | EA | A | 4912551 | -01 | WASHER LOCK EXT TOOTH PH BRZ | NO. 6 | | |
| 30 | 2 | EA | C | 3531768 | -01 | NAMEPLATE | 6.38 IN. UNIVAC SPERRY RAND | | |
| 31 | 1 | EA | D | 5013834 | -00 | HARNESS- SENSING 80 & 90 | COLUMNS | | |
| 36 | 1 | EA | D | 5014900 | -00 | CABLE V81C TO 7T81, 7T82 & | 7T83 | | |
| 37 | 1 | EA | D | 5014899 | -00 | CABLE - V02C TO 7T82 & 7T83 | | | |
| 38 | 1 | EA | D | 5013879 | -01 | WRG HARN MOD V TO 5T813 & 14 | V05E | | |
| 39 | 3 | EA | A | 1660304 | -00 | LUG RING TONGUE | | | |
| 40 | AR | IN | A | 76310702 | -00 | INSULATION TAPE, ELEC - ADH - | PLASTIC | | |
| 41 | 3 | EA | A | 4912529 | -00 | SCREW MACH PAN HD SLOT. CRES | 0.500 LG .250-28 UNF-2A THD | | |
| 42 | 2 | EA | B | 5013901 | -00 | SILICON RECTIFIER ASSY | | | |
| 43 | 6 | EA | C | 3004564 | -03 | SPLICE, CONDUCTOR | CONNECTOR SIZE 4 | | |
| 45 | 3 | EA | A | 71210 | -08 | WASHER PLAIN | | | |
| 46 | 18 | EA | A | 4912524 | -04 | SCREW MACH-PAN HD SLOT. CRES | 0.500 LG 6-32 UNC-2A | | |



PARTS LIST | UNIVAC | SPERRY RAND CORPORATION | CODE IDENT 92120 | ISSUE DATE 01/02/70 | CONTROL C 25 | CA | TYPE M | COMM CODE | ST A | PL | DWG NO 3615623 | SHEET 3 | PL REV W

TITLE OF DRAWING FROM WHICH DETACHED: INTERFACE CONTROL ASSY, 80 COLROW PUNCH TYPE 0604-008-01 | CL A | U/M EA | 15 | DWG SIZE D | RANGE On 99 THRU | ISSUE 1 | PIC REV U

| FIND NO | QUANTITY REQUIRED | U/M | | PART OR IDENT NO DRAWING NO | DASH | NOMENCLATURE OR DESCRIPTION | | S P | C H G |
|---|---|---|---|---|---|---|---|---|---|
| 48 | * | | | | | SEE VARIABLE DATA BELOW | | | |
| 50 | 1 | EA | B | 5016203 | -00 | MARKERS IDENT, FRAME ASSY, | WIRED | | |
| 51 | 24 | IN | A | 3011640 | -04 | INSULATION SLEEVING, ELEC | 7/8 ID | | |
| 53 | 1 | EA | C | 5014650 | -00 | SHIELD-ELECTRONICS | | | |
| 54 | 27 | EA | A | 4912525 | -02 | SCREW MACH PAN HD SLOTTED CRES | 0.375 LG 8-32 UNC-2A THD | | |
| 55 | 38 | EA | C | 4912548 | -02 | WASHER, FLAT - ROUND | NO. 8 | | |
| 56 | 5 | EA | A | 4912551 | -02 | WASHER LOCK EXT TOOTH PH BRZ | NO. 8 | | |
| 57 | 1 | EA | C | 3158397 | -00 | PLATE, IDENTIFICATION - PATENT | | | |
| 59 | 1 | EA | C | 5014609 | -00 | CABLE - INPUT PWR | | | |
| 60 | 1 | EA | C | 5013127 | -07 | DOOR ASSEMBLY, MOTOR | PRIMER ONLY | | |
| 61 | 1 | EA | A | 5014793 | -00 | DECALCOMANIA 80 COL CARD | | | |
| 62 | 2 | EA | C | 4913190 | -02 | PIN, COTTER-CRES, .031 DIA | 1/2 LG | | |
| 63 | 1 | EA | B | 5013106 | -00 | SHAFT,PIVOT | | | |
| 65 | 1 | EA | B | 5014960 | -00 | CAPACITOR ASSY 39UF | | | |
| 68 | 2 | EA | C | 5018205 | -00 | PRINTED CIRCUIT BOARD SPACER | | | |
| 69 | 2 | EA | B | 5018202 | -00 | JUMPER WIRE ASSY | | | |
| 70 | 1 | EA | A | 5018432 | -00 | CLAMP, CABLE | | | |
| 72 | 1 | EA | A | 4914169 | -10 | TERMINAL LUG | WIRE SIZE 16-14 STUD SIZE 4 | | |
| 73 | 1 | EA | C | 4912548 | -05 | WASHER, FLAT - ROUND | 0.312 | | |
| 74 | 1 | EA | B | 5019383 | -00 | JUMPER ASSY | | | |



PARTS LIST | UNIVAC | SPERRY RAND CORPORATION | CODE IDENT 92120 | ISSUE DATE 01/02/70 | CONTROL C 25 | CA | TYPE M | COMM CODE | ST A | PL | DWG NO 3615623 | SHEET 4 | PL REV W

TITLE OF DRAWING FROM WHICH DETACHED: INTERFACE CONTROL ASSY, 80 COLROW PUNCH TYPE 0604-008-01 | CL A | U/M EA | 15 | DWG SIZE D | RANGE On 99 THRU | ISSUE 1 | PIC REV U

| FIND NO | QUANTITY REQUIRED | U/M | | PART OR IDENT NO DRAWING NO | DASH | NOMENCLATURE OR DESCRIPTION | | S P | C H G |
|---|---|---|---|---|---|---|---|---|---|
| 75 | 3 | EA | A | 5053597 | -00 | CABLE CLAMP | | | |
| 76 | 1 | EA | C | 5014893 | -00 | CABLE 7T81 & 7T82 TO MOD "V" | | | |
| 77 | 4 | EA | B | 5018686 | -00 | SHIM | | | |
| 78 | 1 | EA | E | 5012265 | -00 | FRAME ASSY | | | |
| 79 | * | | | | | SEE VARIABLE DATA BELOW | | | |
| 80 | * | | | | | SEE VARIABLE DATA BELOW | | | |
| 82 | * | | | | | SEE VARIABLE DATA BELOW | | | |
| 83 | * | | | | | SEE VARIABLE DATA BELOW | | | |
| 84 | * | | | | | SEE VARIABLE DATA BELOW | | | |
| 85 | * | | | | | SEE VARIABLE DATA BELOW | | | |
| 86 | * | | | | | SEE VARIABLE DATA BELOW | | | |
| 87 | * | | | | | SEE VARIABLE DATA BELOW | | | |
| 88 | * | | | | | SEE VARIABLE DATA BELOW | | | |
| 89 | 1 | EA | C | 3011579 | -01 | FAN, TUBEAXIAL | 230 / 208 V AC | | |
| 90 | 4 | EA | A | 4912524 | -03 | SCREW MACH-PAN HD SLOT. CRES | 0.562 LG 6-32 UNC-2A | | |
| 91 | 1 | EA | C | 5026618 | -00 | BLOWER ASSEMBLY - WIRED | | | |
| 92 | 1 | EA | D | 5012745 | -00 | CHIP BOX ASSEMBLY | | | |
| 93 | 1 | EA | B | 5012755 | -00 | SUPPORT BAR-CHIP BOX | | | |
| 94 | 1 | EA | B | 5012775 | -00 | SWITCH ASSY CHIP BOX | | | |
| 95 | 1 | EA | B | 5012756 | -00 | SPRING-EXTENSION | | | |

PARTS LIST | UNIVAC | SPERRY RAND CORPORATION | CODE IDENT 92120 | ISSUE DATE 01/02/70 | CONTROL C 25 | CA A | TYPE M | COMM CODE | ST A | PL | DWG NO 3615623 | SHEET 5 | PL REV W

TITLE OF DRAWING FROM WHICH DETACHED: INTERFACE CONTROL ASSY, 80 COLROW PUNCH TYPE 0604-008-01 | CL A | U/M EA | 15 | DWG SIZE D | RANGE On THRU 99 | ISSUE 1 | PIC REV U

| FIND NO | QUANTITY REQUIRED | U/M | I | PART OR IDENT NO. DRAWING NO | DASH | NOMENCLATURE OR DESCRIPTION | S P | C H G |
|---|---|---|---|---|---|---|---|---|
| 96 | 1 | EA | B | 5012743 | -00 | TUBE,CHIP CHUTE EXTENSION | | |
| 97 | 10 | EA | B | 5010644 | -00 | STUD, SHOULDERED | | |
| 98 | 10 | EA | B | 5010635 | -00 | CATCH BUTTON - ECCENTRIC | | |
| 99 | 2 | EA | D | 5010711 | -00 | CASTER ASSY R.H. | | |
| 100 | 2 | EA | D | 5010710 | -00 | CASTER ASSY-L. H. | | |
| 101 | 4 | EA | B | 402780 | -00 | STUD - PIVOT | | |
| 102 | 2 | EA | A | 5011330 | -00 | STUD,WING HEAD | | |
| 103 | 2 | EA | B | 5013430 | -00 | BRACKET,ANGLE-CONNECTOR | | |
| 104 | 3 | EA | B | 5012305 | -00 | MOLDING, METAL - LONG | | |
| 105 | 1 | EA | B | 5012306 | -00 | MOLDING, METAL - SHORT | | |
| 106 | 1 | EA | B | 5012527 | -00 | BRACKET,SUPPORT-COVER-SHORT | | |
| 107 | 1 | EA | B | 5012304 | -00 | BRACKET,SUPPORT-COVER-INTER- 17 IN. LG. | | |
| 108 | 1 | EA | B | 5012304 | -01 | BRACKET,SUPPORT-COVER-INTER- 14.5 IN. LG. | | |
| 109 | 2 | EA | B | 5012671 | -00 | RAIL,GUIDE | | |
| 110 | 8 | EA | A | 5012792 | -00 | SPACER, STUD | | |
| 111 | 1 | EA | B | 5012303 | -00 | BRACKET,SUPPORT-COVER-LONG | | |
| 112 | 1 | EA | C | 5016854 | -02 | SWITCH,THERMOSTATIC 110 DEG F ACT, 100 DEG F RESE | | |
| 114 | 2 | EA | B | 5013485 | -00 | HINGE SUPPORT ASSY | | |
| 115 | 2 | EA | C | 3164290 | -00 | HINGE | | |
| 116 | 2 | EA | B | 3164289 | -00 | INSULATOR, HINGE | | |



PARTS LIST | UNIVAC | SPERRY RAND CORPORATION | CODE IDENT 92120 | ISSUE DATE 01/02/70 | CONTROL C 25 | CA A | TYPE M | COMM CODE | ST A | PL | DWG NO 3615623 | SHEET 6 | PL REV W

TITLE OF DRAWING FROM WHICH DETACHED: INTERFACE CONTROL ASSY, 80 COLROW PUNCH TYPE 0604-008-01 | CL A | U/M EA | 15 | DWG SIZE D | RANGE On THRU 99 | ISSUE 1 | PIC REV U

| FIND NO. | QUANTITY REQUIRED | U/M | I | PART OR IDENT NO. DRAWING NO. | DASH | NOMENCLATURE OR DESCRIPTION | S P | C H G |
|---|---|---|---|---|---|---|---|---|
| 117 | 6 | EA | B | 3164285 | -00 | SLEEVE, INSULATOR | | |
| 118 | 12 | EA | A | 900065 | -04 | WASHER, NONMET. - FLAT, FIBRE 1/4 | | |
| 119 | 2 | EA | C | 2027804 | -00 | SWITCH, INTERLOCK - SPDT | | |
| 120 | 1 | EA | B | 5012888 | -00 | BRKT., SUPPORT - COVER - SHORT | | |
| 121 | 1 | EA | D | 3615598 | -00 | CONNECTOR FRAME ASSY - WIRED MODULE V - 80 COLUMN | | |
| 122 | 1 | EA | B | 3164309 | -00 | RUBBER STRIP, SOLID | | |
| 123 | 1 | EA | B | 3164287 | -00 | PLATE, STRIKE | | |
| 124 | 1 | OZ | C | 3154741 | -00 | ADHESIVE RUBBER SYNTHETIC | | |
| 125 | 1 | EA | C | 3530807 | -00 | BRACKET ASSEMBLY - FAN | | |
| 126 | 1 | EA | B | 5014675 | -00 | COVER ASSY - MAGAZINE FINISH VARIES UNDER EACH HDR. | | |
| 127 | 1 | EA | D | 3615606 | -00 | CONTROL PANEL - WIRED | | |
| 128 | 1 | EA | B | 5013017 | -00 | BLOCK, SUPPORT | | |
| 129 | # | | | | | SEE VARIABLE DATA BELOW | | |
| 130 | 2 | EA | B | 5013492 | -00 | SCREW, SHOULDER | | |
| 131 | 1 | EA | A | 4914475 | -03 | TERMINAL BOARD - BARRIER TYPE 5 TERMINAL, 15 AMP | | |
| 132 | 2 | EA | A | 71140638 | -00 | SCREW, CAP, SOC HD - HEX, NI PL ST, #6-32 THD, 1 1/4 LG | | |
| 133 | 1 | EA | C | 4913004 | -02 | PIN, SPRING-CRES, 1/8 DIA. 5/8 LG | | |
| 134 | 8 | EA | A | 4912856 | -03 | SCREW, CAP, HEXAGON HEAD CRES 1/4 - 20 X 7/8 LG. | | |
| 135 | 4 | EA | C | 4912509 | -04 | SCREW MACH FLAT HD SLOT. CRES 1.000 LG .250-28 UNF-2A THD | | |
| 136 | 1 | EA | B | 3164316 | -00 | CLAMP, CABLE | | |



PARTS LIST | UNIVAC | SPERRY RAND CORPORATION | CODE IDENT 92120 | ISSUE DATE 01/02/70 | CONTROL C 25 | CA A | TYPE M | COMM CODE | ST A | PL | DWG NO 3615623 | SHEET 7 | PL REV W

TITLE OF DRAWING FROM WHICH DETACHED: INTERFACE CONTROL ASSY, 80 COLROW PUNCH TYPE 0604-008-01 | CL A | U/M EA | 15 | DWG SIZE D | RANGE On THRU 99 | ISSUE 1 | PIC REV U

| FIND NO | QUANTITY REQUIRED | U/M | I | PART OR IDENT NO. DRAWING NO | DASH | NOMENCLATURE OR DESCRIPTION | S P | C H G |
|---|---|---|---|---|---|---|---|---|
| 137 | 24 | EA | C | 4912550 | -04 | WASHER LOCK (SPRING) HELICAL .0.250 | | |
| 138 | 16 | EA | A | 4912507 | -03 | SCREW MACH FLAT HD SLOT. CRES 0.625 LG 10-32 UNF-2A THD | | |
| 139 | 6 | EA | C | 4912852 | -02 | SCREW CAP SOC HD 1/4-20 UNC-3A .750 LG MIN THD LG FULL | | |
| 140 | 2 | EA | C | 4912853 | -02 | SCREW CAP SOC HD 1/4-28 UNF-3A .750 LG MIN THD LG FULL | | |
| 141 | 8 | EA | A | 4912856 | -00 | SCREW, CAP, HEXAGON HEAD CRES 1/4 - 20 X 1/2 LG. | | |
| 142 | 8 | EA | C | 4912542 | -00 | NUT,PLAIN,HEXAGON-MACHINE NO. 10-32UNF THREAD CRES | | |
| 143 | 5 | EA | B | 5013792 | -00 | GROMMET, NEOPRENE | | |
| 144 | 10 | EA | B | 921 | -00 | NUT - HEXAGON | | |
| 145 | 30 | EA | A | 4912551 | -04 | WASHER LOCK EXT TOOTH PH BRZ NO. 1/4 | | |
| 146 | 1 | EA | B | 3530475 | -00 | BRACKET & FASTENER ASSY | | |
| 147 | 1 | EA | B | 3164288 | -00 | ISULATOR, BRACKET | | |
| 148 | 6 | EA | C | 4912541 | -00 | NUT,PLAIN,HEXAGON-FINISHED NO. 1/4-20 UNC THD CRES | | |
| 149 | 6 | EA | A | 4912525 | -04 | SCREW MACH . ..N HD SLOTTED CRES0.500 LG 8-32 UNC-2A THD | | |
| 150 | 36 | EA | C | 4912550 | -02 | WASHER LOCK (S.. ..NG) HELICAL NO. 8 | | |
| 151 | 3 | EA | C | 4912851 | -02 | SCREW CAP SOC -32 UNF-3A .625 LG MIN THD LG FULL | | |
| 152 | 2 | EA | C | 4912526 | -00 | SCREW MACH PAN HD SLOTTED CRES0.375 LG 10-24 UNC-2A THD | | |
| 153 | 20 | EA | C | 4912547 | -00 | NUT, PLAIN, HEX - FINISHED 1/4-28 UNF THD | | |
| 154 | 8 | EA | A | 4912551 | -03 | WASHER LOCK EXT TOOTH PH BRZ NO. 10 | | |
| 155 | 4 | EA | A | 4912504 | -05 | SCREW MACH FLAT HD SLOT. CRES 0.750 LG 6-32 UNC-2A THD | | |
| 156 | 45 | EA | C | 4912548 | -01 | WASHER, FLAT - ROUND NO. 6 | | |



PARTS LIST | UNIVAC | SPERRY RAND CORPORATION | CODE IDENT 92120 | ISSUE DATE 01/02/70 | CONTROL C 25 | CA A | TYPE M | COMM CODE | ST A | PL | DWG NO 3615623 | SHEET 8 | PL REV W

TITLE OF DRAWING FROM WHICH DETACHED: INTERFACE CONTROL ASSY, 80 COLROW PUNCH TYPE 0604-008-01 | CL A | U/M EA | 15 | DWG SIZE D | RANGE On THRU 99 | ISSUE 1 | PIC REV U

| FIND NO. | QUANTITY REQUIRED | U/M | I | PART OR IDENT NO. DRAWING NO. | DASH | NOMENCLATURE OR DESCRIPTION | S P | C H G |
|---|---|---|---|---|---|---|---|---|
| 157 | 8 | EA | | 71080505 | -00 | SCREW, MACH - PAN HD, SLOT. DRSTL, #5-40 THD X 3/8 LG | | |
| 158 | 4 | EA | C | 4912848 | -01 | SCREW CAP SOC HD 6-32 UNC-3A .375 LG | | |
| 159 | 1 | EA | C | 3155736 | -34 | TERMINAL BOARD, BARRIER 4 TERMINALS 2.156 LG | | |
| 160 | 3 | EA | C | 3005565 | -06 | TERMINAL BOARD - 20 TAPEP PIN TERMS 1 THRU 20 SINGLE | | |
| 161 | 3 | EA | A | 71080614 | -00 | SCR,MACH,SLOTTED DRIVE PAN HD6-32 THD.1 1/2 LG.STEEL CAD P | | |
| 162 | 1 | EA | A | 72400109 | -00 | CLAMP, LOOP | | |
| 163 | 5 | EA | C | 4912540 | -02 | NUT,PLAIN,HEXAGON-MACHINE NO. 8-32 UNC THD CRES | | |
| 164 | 12 | IN | B | 5013790 | -00 | CHANNEL, EXTRUDED-NEOPRENE | | |
| 165 | 1 | EA | C | 5013538 | -00 | TUBE ASSY, TOP REAR - R.H. | | |
| 166 | 1 | EA | C | 3159892 | -01 | PLATE, IDENTIFICATION - UL | | |
| 167 | 1 | EA | B | 5013906 | -00 | COVER PLATE ASSY | | |
| 168 | 1 | EA | A | 5016736 | -00 | GROMMET,HALF | | |
| 169 | 1 | EA | C | 4913272 | -06 | GROMMET, RUBBER - .125 GROOVE ID .875 OD 1.625 W .500 | | |
| 170 | 2 | EA | B | 5014632 | -00 | PLATE,INSULATOR | | |
| 171 | 28 | EA | C | 4912548 | -04 | WASHER, FLAT - ROUND 0.250 | | |
| 172 | 2 | EA | B | 5014751 | -00 | BRACKET-GUIDE SUPPORT | | |
| 173 | 2 | EA | B | 5014752 | -00 | BRACKET, GUIDE SUPPORT | | |
| 174 | 1 | EA | B | 3168761 | -00 | BRACKET, FAN - REAR | | |
| 175 | 2 | EA | B | 5014674 | -00 | FILLER-CARD GUIDE FINISH VARIES UNDER EACH HDR. | | |
| 176 | 1 | EA | C | 5016375 | -00 | COVER-RELAY PANEL | | |

PARTS LIST | UNIVAC | SPERRY RAND CORPORATION | CODE IDENT 92120 | ISSUE DATE 01/02/70 | CONTROL C 25 | CA | TYPE M | COMM CODE | ST A | PL | DWG NO 3615623 | SHEET 9 | PL REV W

TITLE OF DRAWING FROM WHICH DETACHED: INTERFACE CONTROL ASSY, 80 COLROW PUNCH TYPE 0604-008-01 | LL A | U/M EA | 15 | DWG SIZE D | RANGE On THRU 99 | ISSUE 1 | PIC REV U

| FIND NO. | QUANTITY REQUIRED | U/M | I/C | PART OR IDENT NO DRAWING NO | DASH | NOMENCLATURE OR DESCRIPTION | S/P | C/G |
|---|---|---|---|---|---|---|---|---|
| 177 | 1 | EA | B | 5018257 | -00 | PLATE, MOUNTING | | |
| 178 | 2 | EA | A | 4912504 | -03 | SCREW MACH FLAT HD SLOT. CRES 0.500 LG 6-32 UNC-2A THD | | |
| 179 | 1 | EA | A | 4912525 | -11 | SCREW MACH PAN HD SLOTTED CRES0.188 LG 8-32 UNC-2A THD | | |
| 180 | AR | IN | A | 4956212 | -99 | WIRE-VINYL INS.24 AWG.STRANDEDCOLOR CODE 9 | | |
| 181 | 1 | EA | B | 3160031 | -00 | BAR - GUIDE SUPPORT | | |
| 182 | 1 | EA | A | 3005442 | -00 | GRILLE,METAL-CIR, FAN GUARD .062 DIA WIRE, ZINC PL | | |
| 183 | 1 | EA | A | 72400118 | -00 | CLAMP, LOOP - NYLOCLIP TYPE HP-N - 1.06 ID | | |
| 185 | 1 | EA | C | 3011609 | -04 | CAPACITOR-RESISTOR 100 OHMS 0.1 UF +-20% | | |
| | | | | REF DES | 1 | 5RC1 | | |
| 186 | AR | IN | C | 3173750 | -02 | INSULATION SLV, ELEC- PVC 20 AWG .034 ID., .016 WALL TH | | |
| 187 | M | | | | | SEE VARIABLE DATA BELOW | | |
| 188 | 1 | EA | C | 3532275 | -18 | EXTRUDED TRIM STRIP ASSEMBLY 20.20 LONG | | |
| 189 | 1 | EA | C | 3532275 | -16 | EXTRUDED TRIM STRIP ASSEMBLY 5.15 LONG | | |
| 190 | 1 | EA | C | 3532275 | -17 | EXTRUDED TRIM STRIP ASSEMBLY 13.05 LONG | | |
| 191 | 1 | EA | C | 3532275 | -09 | EXTRUDED TRIM STRIP ASSEMBLY 26.54 LONG | | |
| 192 | 1 | EA | D | 5030315 | -00 | BRACKET ASSY | | |
| 193 | 4 | EA | A | 4912505 | -02 | SCREW MACH FLAT HD SLOT. CRES 0.500 LG 8-32 UNC-2A THD | | |
| 194 | 1 | EA | B | 5030765 | -00 | CLAMP, CABLE | | |
| 195 | M | | | | | SEE VARIABLE DATA BELOW | | |
| F01 | | X | C | 3837899 | -00 | SCHEMATIC - ROW PUNCH 80 COLUMN | | |



PARTS LIST | UNIVAC | SPERRY RAND CORPORATION | CODE IDENT 92120 | ISSUE DATE 01/02/70 | CONTROL C 25 | CA | TYPE M | COMM CODE | ST A | PL | DWG NO 3615623 | SHEET 10 | PL REV W

TITLE OF DRAWING FROM WHICH DETACHED: INTERFACE CONTROL ASSY, 80 COLROW PUNCH TYPE 0604-008-01 | LL A | U/M EA | 15 | DWG SIZE D | RANGE On THRU 99 | ISSUE 1 | PIC REV U

| FIND NO. | QUANTITY REQUIRED | U/M | I/C | PART OR IDENT NO DRAWING NO | DASH | NOMENCLATURE OR DESCRIPTION | S/P | C/G |
|---|---|---|---|---|---|---|---|---|
| F02 | | EA | D | 5028981 | -00 | SCHEMATIC-ROW PUNCH 80 COLUMN | | |
| R01 | | EA | D | 3614107 | -00 | UNIVAC 9300 SYSTEM | | |
| R02 | | X | D | 3842295 | -00 | LOGIC INDEX REVISION LEVEL DWGROW PUNCH 80 COL. | | |
| R03 | | EA | C | 5016855 | -00 | COLOR SELECTION CARD PUNCH | | |
| | | | | NOTE | | (SEL 12 UNLESS OTHERWISE SPEC) | | |
| R04 | | X | B | PL3080329 | -04 | SPARE PT LIST TYPE 0604-00.01 DOCUMENT IDENTITY | | |
| R05 | | X | | SH03752 | -00 | 9000 SERIES ROW PUNCH SUBSYSTEM | | |
| R06 | | EA | D | 5013785 | -00 | ZONE IDENTIFICATION | | |
| R07 | | EA | D | 3614082 | -00 | UNIVAC 9200 SYSTEM | | |
| S01 | | XX | | CS01993 | | MTG PROCEDURE FOR TYPE 'G' TRANSFERS ON ARMORHIDE FIN PN | | |
| S02 | | XX | | DS00353 | | SOLDERING OF ELECTRICAL TERM. | | |
| S03 | | X | | SU00002 | -00 | ADHESIVE BONDING OF MATERIALS PRIMARY SURFACE TREATMENT ONL | | |
| Z12 | | | | H 19953 | 09 | EIR HISTORY: EIR REV , PL REV L. PIC REV K | | |
| Z13 | | | | C 10787 | 07 | EIR HISTORY: EIR REV , PL REV M. PIC REV M | | |
| Z14 | | | | C 10968 | 01 | EIR HISTORY: EIR REV , PL REV N. PIC REV N | | |
| Z15 | | | | C 11014 | 02 | EIR HISTORY: EIR REV , PL REV P. PIC REV P | | |
| Z16 | | | | C 11283 | 01 | EIR HISTORY: EIR REV , PL REV R. PIC REV R | | |
| Z17 | | | | C 11283 | 02 | EIR HISTORY: EIR REV , PL REV S. PIC REV S | | |
| Z18 | | | | C 11418 | 02 | EIR HISTORY: EIR REV , PL REV T. PIC REV T | | |
| Z19 | | | | C 11602 | 01 | EIR HISTORY: EIR REV , PL REV U. PIC REV U | | |

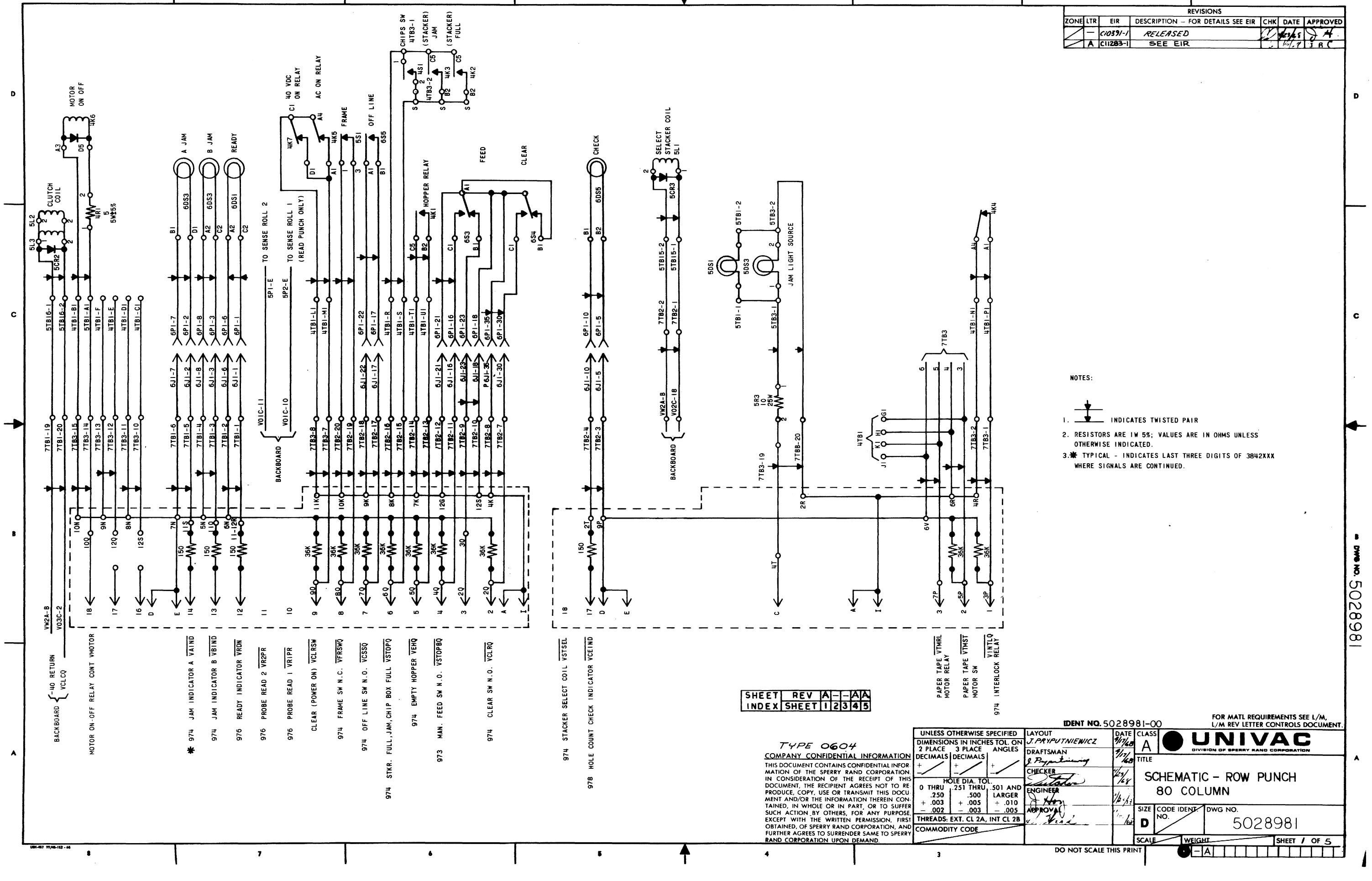


PARTS LIST | UNIVAC | SPERRY RAND CORPORATION | CODE IDENT 92120 | ISSUE DATE 01/02/70 | CONTROL C 25 | CA | TYPE M | COMM CODE | ST A | PL | DWG NO 3615623 | SHEET 11 | PL REV W

TITLE OF DRAWING FROM WHICH DETACHED: INTERFACE CONTROL ASSY, 80 COLROW PUNCH TYPE 0604-008-01 | LL A | U/M EA | 15 | DWG SIZE D | RANGE On THRU 99 | ISSUE 1 | PIC REV U

| FIND NO. | QUANTITY REQUIRED | U/M | I/C | PART OR IDENT NO DRAWING NO | DASH | NOMENCLATURE OR DESCRIPTION | S/P | C/G |
|---|---|---|---|---|---|---|---|---|
| Z20 | | | | S 11740 | 02 | EIR HISTORY: EIR REV , PL REV V. PIC REV U | | |
| Z21 | | | | C 12069 | 01 | EIR HISTORY: EIR REV 02, PL REV W. PIC REV U | | |
| | | | | | | 3615623-00 VARIABLE DATA | | |
| 1 | 1 | EA | D | 3615639 | -XX | PKG COMP DIAG, MOD V - 80 COL SELECTION TO BE MADE | | |
| 48 | 1 | EA | D | 3616164 | -XX | CONN CABLE ASSY-I/O CHANNEL SELECTION TO BE MADE | | |
| | | | | NOTE | | (IF SELECTED QTY MIN 1 MAX 2) | | |
| 79 | 1 | EA | D | 5016950 | -XX | DIST. BOX INPUT ASSY-WIRED SELECTION TO BE MADE | | |
| 80 | 1 | EA | C | 3006160 | -XX | POWER SUPPLY-OUTP -30,+20,-8 VSELECTION TO BE MADE | | |
| 82 | 1 | EA | D | 5018174 | -XX | POWER SUPPLY 60 CYCLE +-40V SELECTION TO BE MADE | | |
| 83 | 1 | EA | D | 5018173 | -XX | POWER SUPPLY 50 CYCLE +/-40V SELECTION TO BE MADE | | |
| 84 | 1 | EA | B | 5013389 | -XX | ELAPSE TIMER 60 CYCLE SELECTION TO BE MADE | | |
| 85 | 1 | EA | B | 5013388 | -XX | ELAPSE TIMER 50 CYCLE SELECTION TO BE MADE | | |
| 86 | 1 | EA | C | 3162816 | -XX | PLAT_,IDENTIFICATION-LETTERED SELECTION TO BE MADE | | |
| 87 | 1 | EA | D | 3614114 | -XX | 250 CPM & PRE-PUNCH READ FEAT.SELECTION TO BE MADE | | |
| 88 | 1 | EA | C | 3614115 | -XX | CARD SCORE INHIBIT FEATURE SELECTION TO BE MADE | | |
| 129 | 1 | EA | D | 3615618 | -XX | PANEL ASSY, RELAY - WIRED SELECTION TO BE MADE | | |
| 167 | 1 | EA | B | 5028991 | -XX | JUMPER WIRE ASSEMBLY SELECTION TO BE MADE | | |
| 195 | 1 | EA | D | 3617566 | -XX | CARD EDGE NOTCH SELECTION TO BE MADE | | |

| REVISIONS | | | | | | |
|---|---|---|---|---|---|---|
| ZONE | LTR | EIR | DESCRIPTION – FOR DETAILS SEE EIR | CHK | DATE | APPROVED |
| | — | C10391-1 | RELEASED | | 10/7/65 | |
| | A | C11283-1 | SEE EIR | | 10/1/67 | JRC |




NOTES:

1. ⟋⟍ INDICATES TWISTED PAIR
2. RESISTORS ARE 1W 5%; VALUES ARE IN OHMS UNLESS OTHERWISE INDICATED.
3. ✱ TYPICAL - INDICATES LAST THREE DIGITS OF 3842XXX WHERE SIGNALS ARE CONTINUED.

| SHEET | REV | A | – | – | A | A |
|---|---|---|---|---|---|---|
| INDEX | SHEET | 1 | 2 | 3 | 4 | 5 |


TYPE 0604
COMPANY CONFIDENTIAL INFORMATION
THIS DOCUMENT CONTAINS CONFIDENTIAL INFORMATION OF THE SPERRY RAND CORPORATION. IN CONSIDERATION OF THE RECEIPT OF THIS DOCUMENT, THE RECIPIENT AGREES NOT TO REPRODUCE, COPY, USE OR TRANSMIT THIS DOCUMENT AND/OR THE INFORMATION THEREIN CONTAINED, IN WHOLE OR IN PART, OR TO SUFFER SUCH ACTION BY OTHERS, FOR ANY PURPOSE, EXCEPT WITH THE WRITTEN PERMISSION, FIRST OBTAINED, OF SPERRY RAND CORPORATION, AND FURTHER AGREES TO SURRENDER SAME TO SPERRY RAND CORPORATION UPON DEMAND.


IDENT NO. 5028981-00

FOR MATL REQUIREMENTS SEE L/M, L/M REV LETTER CONTROLS DOCUMENT.

| UNLESS OTHERWISE SPECIFIED | | | |
|---|---|---|---|
| DIMENSIONS IN INCHES TOL. ON | | | |
| 2 PLACE DECIMALS | 3 PLACE DECIMALS | ANGLES | |
| + / – | + / – | + / – | |
| HOLE DIA. TOL. | | | |
| 0 THRU .250 | .251 THRU .500 | .501 AND LARGER | |
| + .003 – .002 | + .005 – .003 | + .010 – .005 | |
| THREADS: EXT. CL 2A, INT CL 2B | | | |
| COMMODITY CODE | | | |

| | | |
|---|---|---|
| LAYOUT | J. PRYPUTNIEWICZ | 4/17/68 |
| DRAFTSMAN | J. Pryputniewicz | 4/17/68 |
| CHECKER | | 4/24/68 |
| ENGINEER | | 4/24/68 |
| APPROVAL | | 4/24/68 |

DO NOT SCALE THIS PRINT

CLASS A

UNIVAC
DIVISION OF SPERRY RAND CORPORATION

TITLE
SCHEMATIC - ROW PUNCH
80 COLUMN

| SIZE | CODE IDENT NO. | DWG NO. |
|---|---|---|
| D | | 5028981 |

SCALE | WEIGHT | SHEET 1 OF 5

-A

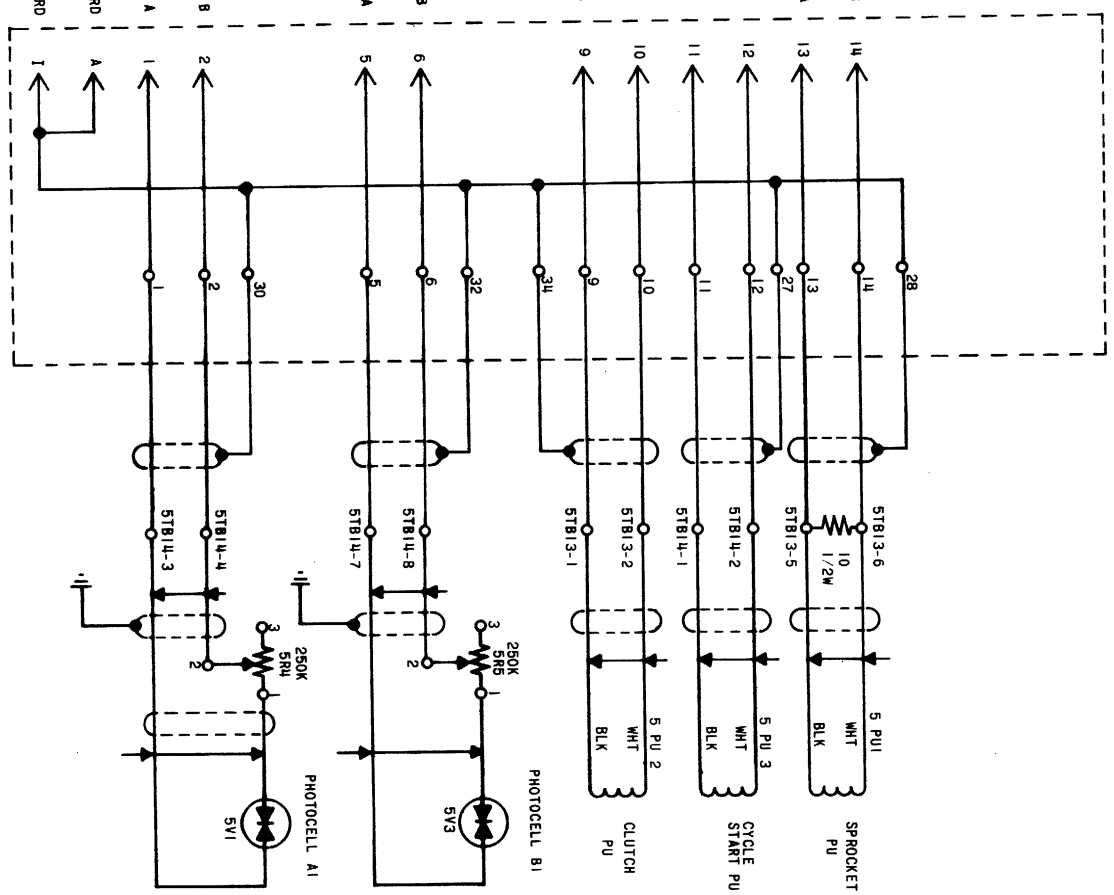
DWG NO. 5028981

UNI-457 99/65-152 - 66

DO NOT SCALE THIS PRINT

| CLASS | UNIVAC DIVISION OF SPERRY RAND CORPORATION | | |
|---|---|---|---|
| A | | | |
| SIZE D | CODE IDENT NO. | DWG NO. 5028981 | |
| SCALE | WEIGHT | SHEET 2 | |

5028981 - DWG NO.




NOTES:
1. ⏚ INDICATES TWISTED PAIR.
2. # INDICATES LAST 3 DIGITS OF DWG. 38#2XXX WHERE SIGNALS ARE CONTINUED.

| REVISIONS | | | | | |
|---|---|---|---|---|---|
| ZONE | LTR | ECR | DESCRIPTION – FOR DETAILS SEE ECR | CHK | DATE | APPROVED |
| | – | C0891-1 | RELEASED | | | |

(CONTROLLING PIC REV LEVEL APPEARS ON THE FIRST SHEET)

| REVISIONS | | | | | | |
|---|---|---|---|---|---|---|
| SYM | ZONE | EIR | DESCRIPTION | CHK | DATE | APPROVED |
| – | | E 10391-1 | RELEASED | | 1/26 | |

KEY:

CR = CONTROL PANEL

DIST = DISTRIBUTION BOX

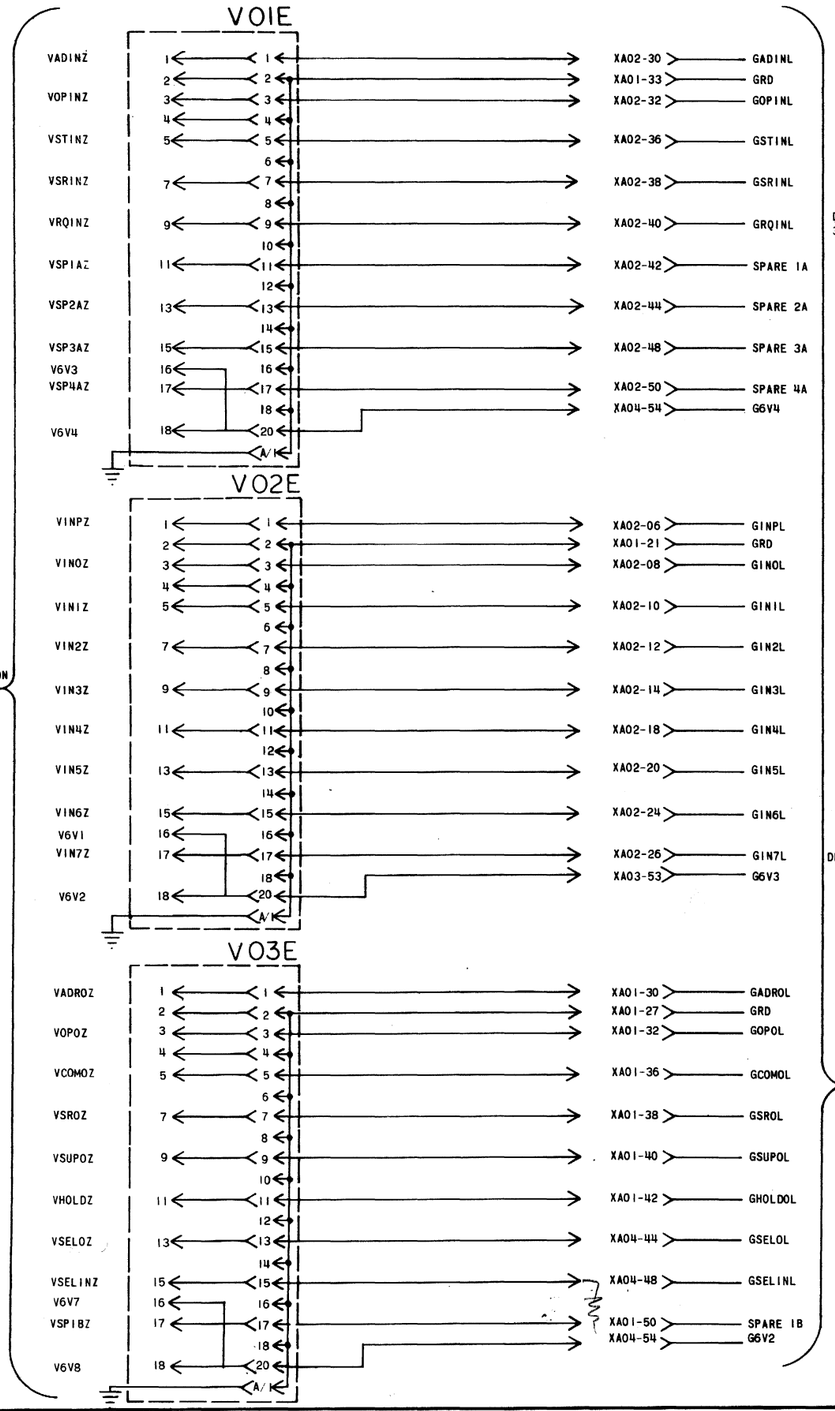
R.P. = RELAY PANEL

| CLASS | | |
|---|---|---|
| A | UNIVAC | |
| CODE IDENT NO. | SIZE | DWG NO. |
| | D | 5028981 |
| SCALE | | SHEET 3 OF |

DO NOT SCALE THIS PRINT

DWG NO 5028981

| REVISIONS | | | | | | |
|---|---|---|---|---|---|---|
| ZONE | LTR | EIR | DESCRIPTION – FOR DETAILS SEE EIR | CHK | DATE | APPROVED |
| | A | C11283-1 | RELEASED | DD | 11/14/69 | JRC |





COMPANY CONFIDENTIAL INFORMATION

THIS DOCUMENT CONTAINS CONFIDENTIAL INFORMATION OF THE SPERRY RAND CORPORATION. IN CONSIDERATION OF THE RECEIPT OF THIS DOCUMENT, THE RECIPIENT AGREES NOT TO REPRODUCE, COPY, USE OR TRANSMIT THIS DOCUMENT AND/OR THE INFORMATION THEREIN CONTAINED, IN WHOLE OR IN PART, OR TO SUFFER SUCH ACTION BY OTHERS, FOR ANY PURPOSE, EXCEPT WITH THE WRITTEN PERMISSION, FIRST OBTAINED, OF SPERRY RAND CORPORATION, AND FURTHER AGREES TO SURRENDER SAME TO SPERRY RAND CORPORATION UPON DEMAND.


UNLESS OTHERWISE SPECIFIED
DIMENSIONS IN INCHES TOL. ON 2 PLACE DECIMALS ± | 3 PLACE DECIMALS ± | ANGLES ±
HOLE DIA. TOL. 0 THRU .250 + .003 − .002 | .251 THRU .500 + .005 − .003 | .501 AND LARGER + .010 − .005
THREADS: EXT. CL 2A, INT CL 2B
COMMODITY CODE

| | | |
|---|---|---|
| LAYOUT | T MAJSAK | 2/3/69 |
| DRAFTSMAN | T MAJSAK | 2/3/69 |
| CHECKER | [illegible] | 11/24/69 |
| ENGINEER | J ECHEAT | 11/24/69 |
| APPROVAL | | |

~~PART NO.~~ IDENT NO. 5028981-00

FOR MATL REQUIREMENTS SEE L/M, L/M REV LETTER CONTROLS DOCUMENT.

DO NOT SCALE THIS PRINT

CLASS A

UNIVAC
DIVISION OF SPERRY RAND CORPORATION

TITLE
SCHEMATIC-ROW PUNCH
80 COLUMN

SIZE D | CODE IDENT. NO. | DWG NO. 5028981

SCALE — | WEIGHT | SHEET 4 OF

DWG NO. 5028981

| REVISIONS | | | | | | |
|---|---|---|---|---|---|---|
| ZONE | LTR | EIR | DESCRIPTION – FOR DETAILS SEE EIR | CHK | DATE | APPROVED |
| | A | C11283-H | SEE EIR | | | JAE |

| GROUND CONNECTIONS NOT SHOWN | | | |
|---|---|---|---|
| XA01-07 | XA02-07 | XA03-07 | XA04-07 |
| XA01-09 | XA02-09 | XA03-09 | XA04-09 |
| XA01-11 | XA02-11 | XA03-11 | XA04-11 |
| XA01-13 | XA02-13 | XA03-13 | XA04-13 |
| XA01-15 | XA02-15 | XA03-15 | XA04-15 |
| XA01-19 | XA02-19 | XA03-19 | XA04-19 |
| XA01-21 | XA02-21 | XA03-21 | XA04-21 |
| XA01-25 | XA02-25 | XA03-25 | XA04-25 |
| XA01-27 | XA02-27 | XA03-27 | XA04-27 |
| XA01-31 | XA02-31 | XA03-31 | XA04-31 |
| XA01-33 | XA02-33 | XA03-33 | XA04-33 |
| XA01-37 | XA02-37 | XA03-37 | XA04-37 |
| XA01-39 | XA02-39 | XA03-39 | XA04-39 |
| XA01-41 | XA02-41 | XA03-41 | XA04-41 |
| XA01-43 | XA02-43 | XA03-43 | XA04-43 |
| XA01-45 | XA02-45 | XA03-45 | XA04-45 |
| XA01-49 | XA02-49 | XA03-49 | XA04-49 |
| XA01-51 | XA02-51 | XA03-51 | XA04-51 |

HSB ORGIN
FROM I/O CHANNEL OR
PREVIOUS CONTROL UNIT

| | | | |
|---|---|---|---|
| GADINL | XA02-30 | XA03-30 | GADINL |
| GOPINL | XA02-32 | XA03-32 | GOPINL |
| GSTINL | XA02-36 | XA03-36 | GSTINL |
| GSRINL | XA02-38 | XA03-38 | GSRINL |
| GRQINL | XA02-40 | XA03-40 | GRQINL |
| SPARE 1A | XA02-42 | XA03-42 | SPARE 1A |
| SPARE 2A | XA02-44 | XA03-44 | SPARE 2A |
| SPARE 3A | XA02-48 | XA03-48 | SPARE 3A |
| SPARE 4A | XA02-50 | XA03-50 | SPARE 4A |
| G6V4 | XA04-54 | XA01-54 | G6V4 |
| GINPL | XA02-06 | XA03-06 | GINPL |
| GINOL | XA02-08 | XA03-08 | GINOL |
| GINIL | XA02-10 | XA03-10 | GINIL |
| GIN2L | XA02-12 | XA03-12 | GIN2L |
| GIN3L | XA02-14 | XA03-14 | GIN3L |
| GIN4L | XA02-18 | XA03-18 | GIN4L |
| GIN5L | XA02-20 | XA03-20 | GIN5L |
| GIN6L | XA02-24 | XA03-24 | GIN6L |
| GIN7L | XA02-26 | XA03-26 | GIN7L |
| G6V3 | XA03-53 | XA02-53 | G6V3 |
| GADROL | XA01-30 | XA04-30 | GADROL |
| GOPOL | XA01-32 | XA04-32 | GOPOL |
| GCOMOL | XA01-36 | XA04-36 | GCOMOL |
| GSROL | XA01-38 | XA04-38 | GSROL |
| GSUPOL | XA01-40 | XA04-40 | GSUPOL |
| GHOLDOL | XA01-42 | XA04-42 | GHOLDOL |
| GSELOL | XA04-44 | XA01-44 | GSELOL |
| GSELINL | XA04-48 | XA01-48 | GSELINL |
| SPARE 1B | XA01-50 | XA04-50 | SPARE 1B |
| G6V2 | XA04-54 | XA01-54 | G6V2 |
| GOBOL | XA01-06 | XA04-06 | GOBOL |
| GOBOL | XA01-08 | XA04-08 | GOBOL |
| GOB1L | XA01-10 | XA04-10 | GOB1L |
| GOB2L | XA01-12 | XA04-12 | GOB2L |
| GOB3L | XA01-14 | XA04-14 | GOB3L |
| GOB4L | XA01-18 | XA04-18 | GOB4L |
| GOB5L | XA01-20 | XA04-20 | GOB5L |
| GOB6L | XA01-24 | XA04-24 | GOB6L |
| GOB7L | XA01-26 | XA04-26 | GOB7L |
| G6V1 | XA01-53 | XA04-53 | G6V1 |
| GSELOL | XA01-44 | XA04-44 | GSELOL |
| GSELINL | XA01-48 | XA04-48 | GSELINL |

TO NEXT PUNCH UNIT ON THE I/O CHANNEL
HSB DESTINATION D3842953-00

TO NEXT PUNCH UNIT ON THE I/O CHANNEL
HSB DESTINATION D3842954-00

D115

DWG NO. 5028981

COMPANY CONFIDENTIAL INFORMATION
THIS DOCUMENT CONTAINS CONFIDENTIAL INFORMATION OF THE SPERRY RAND CORPORATION. IN CONSIDERATION OF THE RECEIPT OF THIS DOCUMENT, THE RECIPIENT AGREES NOT TO REPRODUCE, COPY, USE OR TRANSMIT THIS DOCUMENT AND/OR THE INFORMATION THEREIN CONTAINED, IN WHOLE OR IN PART, OR TO SUFFER SUCH ACTION BY OTHERS, FOR ANY PURPOSE, EXCEPT WITH THE WRITTEN PERMISSION, FIRST OBTAINED, OF SPERRY RAND CORPORATION, AND FURTHER AGREES TO SURRENDER SAME TO SPERRY RAND CORPORATION UPON DEMAND.

~~PART NO.~~
IDENT NO. 5028981-00

FOR MATL REQUIREMENTS SEE L/M,
L/M REV LETTER CONTROLS DOCUMENT.

UNLESS OTHERWISE SPECIFIED
DIMENSIONS IN INCHES TOL. ON
2 PLACE DECIMALS +
3 PLACE DECIMALS +
ANGLES +
HOLE DIA. TOL.

| 0 THRU .250 | .251 THRU .500 | .501 AND LARGER |
|---|---|---|
| + .003 – .002 | + .005 – .003 | + .010 – .005 |

THREADS: EXT. CL 2A, INT CL 2B
COMMODITY CODE

| | | |
|---|---|---|
| LAYOUT | T. MAJSAK | 2/24/69 |
| DRAFTSMAN | T. MAJSAK | 2/24/69 |
| CHECKER | [illegible] | 4/1/69 |
| ENGINEER | J ECHEAT | 4/1/69 |
| APPROVAL | | |

DO NOT SCALE THIS PRINT

CLASS A

UNIVAC
DIVISION OF SPERRY RAND CORPORATION

TITLE
SCHEMATIC ROW PUNCH
80 COLUMN

SIZE D | CODE IDENT. NO. | DWG NO. 5028981

SCALE — | WEIGHT | SHEET 5 OF

| REVISIONS | | | | | | |
|---|---|---|---|---|---|---|
| ZONE | LTR | E R | DESCRIPTION – FOR DETAILS SEE EIR | CHK | DATE | APPROVED |
| | – | H11584-12 | RELEASE IDENT-00 | | 2-27-67 | |
| | A | H18561-2 | REVISION ON SHEET 4 & 5 | | 5-10-67 | |
| | B | H18971-2 | REVISION ON SHEET 4 & 5 | | 8-28-67 | |
| D65 | C | H19064-1 | CHG SIGNAL TO "OFF LINE" & "CLEAR". REVISED SH 1 THRU 5. | | 11-2-67 | |
| | D | C10100-1 | SEE EIR REV SH 4 & 5 | | | |
| | E | 19601-6 | SEE EIR REV SH 3, 4 & 5 | | | |
| | F | C10391-1 | SEE EIR REV SH 1 | | | |
| | G | C11283-1 | SEE EIR | | | |
| | H | 12369-1 | SEE EIR | | | |
| | J | C13356-1 | SEE EIR | | | |
| | K | C15294-1 | SEE EIR REV SH 3 | | | |
| | L | C15886-1 | SEE EIR | | | |

NOTES:

1. INDICATES TWISTED PAIR
2. RESISTORS ARE 1W 5%; VALUES ARE IN OHMS UNLESS OTHERWISE INDICATED.
3. ✱ TYPICAL - INDICATES LAST THREE DIGITS OF 3842XXX WHERE SIGNALS ARE CONTINUED.

| SHEET INDEX | REV | L | L | K | H | J |
|---|---|---|---|---|---|---|
| | SHEET | 1 | 2 | 3 | 4 | 5 |

TYPE 0604

COMPANY CONFIDENTIAL INFORMATION
THIS DOCUMENT CONTAINS CONFIDENTIAL INFORMATION OF THE SPERRY RAND CORPORATION. IN CONSIDERATION OF THE RECEIPT OF THIS DOCUMENT, THE RECIPIENT AGREES NOT TO REPRODUCE, COPY, USE OR TRANSMIT THIS DOCUMENT AND/OR THE INFORMATION THEREIN CONTAINED, IN WHOLE OR IN PART, OR TO SUFFER SUCH ACTION BY OTHERS, FOR ANY PURPOSE EXCEPT WITH THE WRITTEN PERMISSION, FIRST OBTAINED, OF SPERRY RAND CORPORATION, AND FURTHER AGREES TO SURRENDER SAME TO SPERRY RAND CORPORATION.

| UNLESS OTHERWISE SPECIFIED | | | |
|---|---|---|---|
| DIMENSIONS IN INCHES TOL. ON | | | |
| 2 PLACE DECIMALS | 3 PLACE DECIMALS | ANGLES | |
| ± | ± | ± | |
| HOLE DIA. TOL. | | | |
| 0 THRU .250 ± .003 – .002 | .251 THRU .500 ± .005 – .003 | .501 AND LARGER ± .010 – .005 | |
| THREADS: EXT. C- 2A, INT CL 2B | | | |
| COMMODITY CODE | | | |

| | | |
|---|---|---|
| LAYOUT | J. Morris | 2-15-67 |
| DRAFTSMAN | G. Straw | 2-17-67 |
| CHECKER | | 2-27-67 |
| ENGINEER | H.E. Stark | 3-1-67 |
| APPROVAL | | 3-1-67 |
| | | 3-1-67 |

DO NOT SCALE THIS PRINT

3837899-00
IDENT NO.

FOR MATL REQUIREMENTS SEE L/M, L/M REV LETTER CONTROLS DOCUMENT.

CLASS A

UNIVAC
DIVISION OF SPERRY RAND CORPORATION

TITLE
SCHEMATIC - ROW PUNCH 80 COLUMN

SIZE D | CODE IDENT NO | DWG NO. 3837899

SCALE | WEIGHT | SHEET 1 OF 5

A B C D E F G H J K L

3837899

| REVISIONS (CONTROLLING PIC REV LEVEL APPEARS ON THE FIRST SHEET. | | | | | | |
|---|---|---|---|---|---|---|
| ZONE | LTR | EIR | DESCRIPTION – FOR DETAILS SEE EIR | CHK | DATE | APPROVED |
| BG | C | M10034 | LAST THREE DIGITS WERE *973 | [illegible] | 4-2-67 | [illegible] |
| / | L | C 15886-1 | SEE EIR | [illegible] | [illegible] | [illegible] |




NOTES:

1. ⏚ INDICATES TWISTED PAIR.
2. # INDICATES LAST 3 DIGITS OF DWG. 3842XXX WHERE SIGNALS ARE CONTINUED.

DWG NO. 3837899

| CLASS | UNIVAC |
|---|---|
| A | DIVISION OF SPERRY RAND CORPORATION |
| SIZE D | CODE IDENT NO. |
| | DWG NO. 3837899 |
| SCALE | WEIGHT |
| | SHEET 2 |

DO NOT SCALE THIS PRINT

| REVISIONS | | | | | | |
|---|---|---|---|---|---|---|
| SYM | ZONE | EIR | DESCRIPTION | CHK | DATE | APPROVED |
| C | CD 2,3 | H9906 -1 | ADD CONN. TO BACKBD. FROM LV & HV POWER SUPPLY ; IR1 WAS 5Ω. | | 11-2-67 | |
| E | | 19601-6 | SEE EIR | | | |
| F | | C 10391-1 | SEE EIR | | | |

1TB1-1 · 260V 9 · 250V 8 · 240V 7 · 230V 6 · 220V 5 · 210V 4 · 200V 3 · 190V 2 · COMMON · 1T1 · 15 · 110 VAC 300VA · 14 · 230 VAC COMMON

20A ICB1 · 1C1 · 1C2 · 4W1-1 · J1 · ICB2 1.0A · 1TB1-9 · 2TB3-4 · 2TB3-5 · 2B1 BLOWER MOTOR · B · VB1 BLOWER MOTOR

ICB4 5.0A · 13 · 110 VAC 300VA · 12 · 1J3

1TB1-10 · 1TB1-11 · 1RC1 0.5 μf 22 Ω · 1RC2 0.5 μf 22 Ω

1K2 · A1 · A2 · A4 · B4 · B2 · B1

1K3 · A2 · A1 · ICB6 5.0 A. T1 · 1TB1-14 · 1TB1-13 · 5B1 DRIVE MOTOR · WHT · BLK · T4 · 5RC1 0.1 μf 100 Ω

2M1 ELAPSED TIME METER · M

1TB1-15 · ICB3 2.0 A. · 1K1 · A1 · A2

2JB1 L.V. POWER SUPPLY · (L.V. RETURN) 2TB1-6 · 2TB1-5 (-30V) VWM4F-D/E · 2TB1-4 (-8V) VWM4F-C · 2TB1-3 (+20V) VWM3F-G · VWM3F-A/1 · 1TB1-16

4TB2-L1 · +20V · C5 · B1 · 4K5 · B2 · 4TB2-M1 · 1P2-39 1J2-39 · B3 · A3 · 1K1 H.V. PWR SUP "ON" · 1R2 75 Ω · 1TB1-5 · 1TB1-7 1J2-35 1P2-35

3JB1 · HIGH VOLTAGE - 40 VDC POWER SUPPLY · (-40V RETURN) 3TB1-3 · (-40V) 3TB1-4 · VWM1A-B · VWM3F-A/1

1K1 · 1R1 2Ω 100W · B2 · B4 · 4CR7 · A3 · D5 · 4K7 DC. CLEAR · 4R2 1.2K · 4TB2-U1 · 1J2-34 1P2-34 · 1P2-37 1J2-37

7S3 · 6S1 POWER "ON" A SW · 1P2-6 1J2-6 · 6J1-31 6P1-31 · 4TB2-W2 · C1

1K6 · B1 · A5 · B2 · 1J2-24 1P2-24 · 6P1-40 6J1-40

6S2 POWER "OFF" SW · A2 · B2 · 2TB3-1 · 6J1-36 6P1-36 · 2S1 AIR FLOW · 3 · 2TB3-2 · 6J1-37 6P1-37 · A2 · 6S1 POWER ON B · C2 · 6P1-38 6J1-38 · 1P2-27 1J2-27

24 VAC · 1T1 24 VAC · ICB5 2.0 A. · 1K6 · C1 · C4 · 4K6 · D1 · C1 · C2 · 1P2-17 1J2-17 · 4TB2-B1 · D2 · 4TB2-A1 · 4TB2-A2 · 0.1 μf 100 Ω · 4RC1 · 1P2-32 1J2-32 · A3 · 1K3 DRIVE MOTOR ON · B3 · 10 · 24 VAC COMMON · 1J2-4 1P2-4 · 1J2-2 1P2-2 · 6J1-11 6P1-11 · 4TB1-W1 · 4TB1-W · 1J2-14 1P2-14 · 1K2 L.V. PWR SUP "ON" · B3 · A3

5S2 BRUSH INT'LOCK · 5S1 INTERPOSER INT'LOCK · 5S8 BRUSH INT'LOCK · READ PUNCH ONLY · SUM PUNCH ONLY · 5S16 INT'LOCK (SIDE) · 5S15 BAR INT'LOCK · 5S6 INTERPOSER INT'LOCK 2 · 7S1 COVER INT'LOCK · 4TB2-C1 · C5 · 4TB2-C2 · C3 · 4CR4 · 4K4 · B1 · 4K4 INT'LOCK "ON" · 4TB2-S1 · 4TB2-D · 6J1-15 6P1-15 · 1J2-9 1P2-9 4TB2-M1 · 4K7 · D3 · D4 · 4TB2-P1 · 6J1-13 6P1-13 · 1J2-19 1P2-19

6S5 OFF LINE · B2 · C2 · 6DS5 OFF LINE ON · A2 · D2 · 6DS1 INT'L · A1 · D1 · B1 · C1 · C.R. · 6DS2 POWER DC. · R.R.

4K3 · A1 · A4 · 4TB2-K1 · 6J1-33 6P1-33 · 6DS6 · STACKER JAM · 5S4 · 4TB2-E1 · C3 · 4K1 HOPPER · 4CR1 · 4K2 · 4TB2-J1 · 6J1-26 6P1-26 · STACKER FULL · 5S5 · 4TB2-F1 · 4K2 STACKER FULL · 4CR2 · 4K1 · 4TB2-H1 · 6J1-25 6P1-25 · 6DS4 · HOPPER · 5S3 · 4TB2-G1 · 4K3 STACKER JAM · 4CR3 · 4S2 · CHIP BOX INT'LOCK 7S2 · 4TB3-3 · 4TB3-4 · 6J1-28 6P1-28 · CHIPS · 4TB2-R1 · 6J1-12 6P1-12 · 6DS2 POWER AC · 4K5 A.C. CLEAR · 4CR5 · 1K6 POWER "ON" · 1P2-29 1J2-29 · 4K5 · +20V · C4 · 4K7 · 4TB2-T1 · V05F16 · HIGH SPEED BUS DRIVERS

KEY:

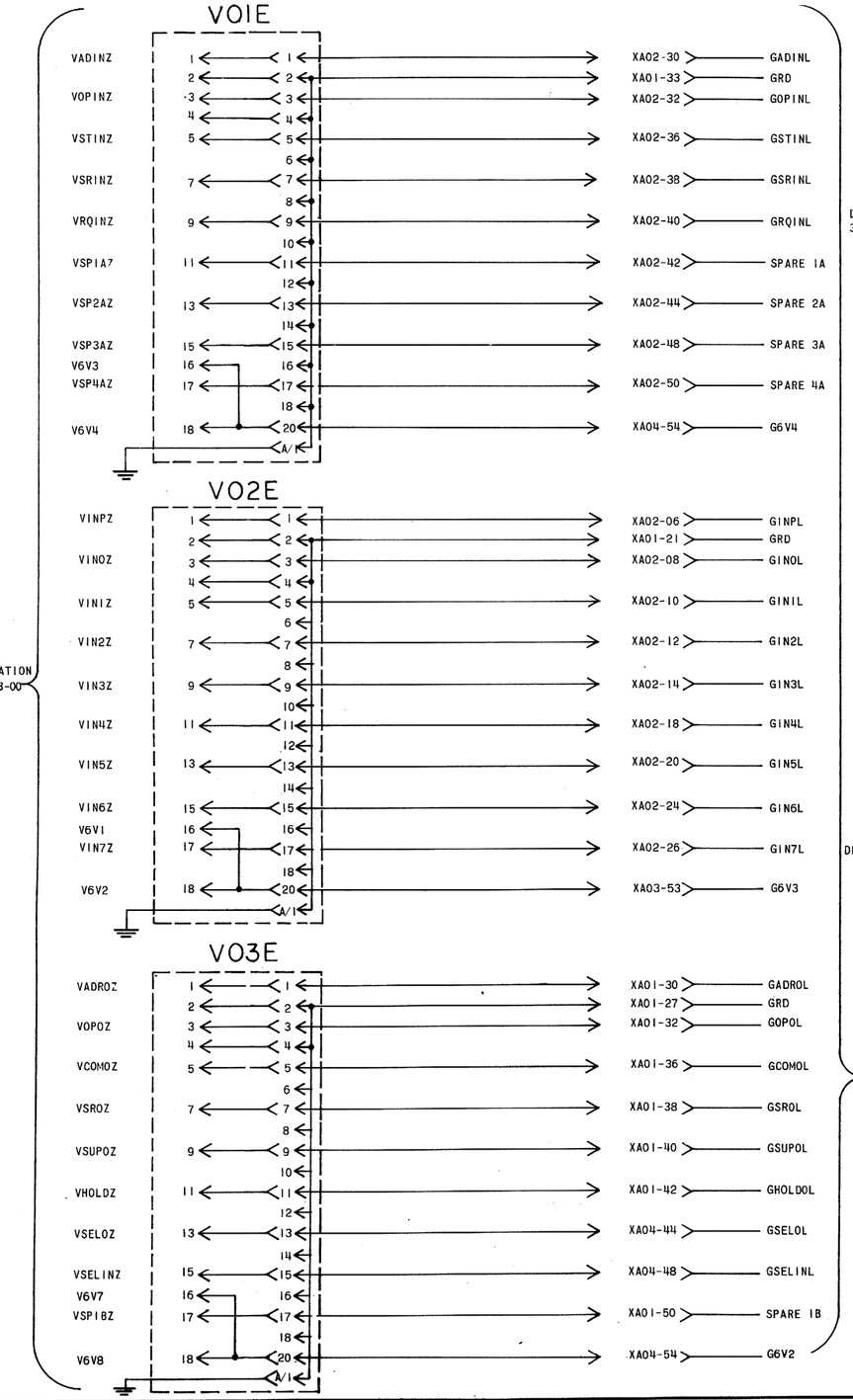
C.P. = CONTROL PANEL

D.S.T. = DISTRIBUTION BOX

R.P. = RELAY PANEL

| | | | |
|---|---|---|---|
| CLASS A | UNIVAC | | |
| CODE IDENT NO. | SIZE D | DWG NO. 3837899 | |
| SCALE NONE | | SHEET 3 OF | |

DWG NO 3837899




| REVISIONS | | | | | | |
|---|---|---|---|---|---|---|
| ZONE | LTR | EIR | DESCRIPTION — FOR DETAILS SEE EIR | CHK | DATE | APPROVED |
| | G | C11283-1 | RELEASED | | 11-1-67 | JBC |


COMPANY CONFIDENTIAL INFORMATION

THIS DOCUMENT CONTAINS CONFIDENTIAL INFORMATION OF THE SPERRY RAND CORPORATION. IN CONSIDERATION OF THE RECEIPT OF THIS DOCUMENT, THE RECIPIENT AGREES NOT TO REPRODUCE, COPY, USE OR TRANSMIT THIS DOCUMENT AND/OR THE INFORMATION THEREIN CONTAINED, IN WHOLE OR IN PART, OR TO SUFFER SUCH ACTION BY OTHERS, FOR ANY PURPOSE, EXCEPT WITH THE WRITTEN PERMISSION, FIRST OBTAINED, OF SPERRY RAND CORPORATION, AND FURTHER AGREES TO SURRENDER SAME TO SPERRY RAND CORPORATION UPON DEMAND.


UNLESS OTHERWISE SPECIFIED
DIMENSIONS IN INCHES TOL. ON 2 PLACE DECIMALS ± | 3 PLACE DECIMALS ± | ANGLES ±
HOLE DIA. TOL. 0 THRU .250 + .003 − .002 | .251 THRU .500 + .005 − .003 | .501 AND LARGER + .010 − .005
THREADS: EXT. CL 2A, INT CL 2B
COMMODITY CODE

| | | |
|---|---|---|
| LAYOUT | T MAJSAK | 2/3/69 |
| DRAFTSMAN | T MAJSAK | 2/3/69 |
| CHECKER | | 11/8/69 |
| ENGINEER | J ECHERT | 11/14/69 |
| APPROVAL | | |

~~PART NO.~~ IDENT NO. 3837899-00

FOR MATL REQUIREMENTS SEE L/M, L/M REV LETTER CONTROLS DOCUMENT.

DO NOT SCALE THIS PRINT

CLASS A

UNIVAC
DIVISION OF SPERRY RAND CORPORATION

TITLE
SCHEMATIC-ROW PUNCH
80 COLUMN

SIZE D | CODE IDENT. NO. | DWG NO. 3837899

SCALE — | WEIGHT | SHEET 4 OF

DWG NO. 3837899

| GROUND CONNECTIONS NOT SHOWN | | | |
|---|---|---|---|
| XA01-07 | XA02-07 | XA03-07 | XA04-07 |
| XA01-09 | XA02-09 | XA03-09 | XA04-09 |
| XA01-11 | XA02-11 | XA03-11 | XA04-11 |
| XA01-13 | XA02-13 | XA03-13 | XA04-13 |
| XA01-15 | XA02-15 | XA03-15 | XA04-15 |
| XA01-19 | XA02-19 | XA03-19 | XA04-19 |
| XA01-21 | XA02-21 | XA03-21 | XA04-21 |
| XA01-25 | XA02-25 | XA03-25 | XA04-25 |
| XA01-27 | XA02-27 | XA03-27 | XA04-27 |
| XA01-31 | XA02-31 | XA03-31 | XA04-31 |
| XA01-33 | XA02-33 | XA03-33 | XA04-33 |
| XA01-37 | XA02-37 | XA03-37 | XA04-37 |
| XA01-39 | XA02-39 | XA03-39 | XA04-39 |
| XA01-41 | XA02-41 | XA03-41 | XA04-41 |
| XA01-43 | XA02-43 | XA03-43 | XA04-43 |
| XA01-45 | XA02-45 | XA03-45 | XA04-45 |
| XA01-49 | XA02-49 | XA03-49 | XA04-49 |
| XA01-51 | XA02-51 | XA03-51 | XA04-51 |

| REVISIONS | | | | | | |
|---|---|---|---|---|---|---|
| ZONE | LTR | EIR | DESCRIPTION – FOR DETAILS SEE EIR | CHK | DATE | APPROVED |
| | G | C11283-1 | SEE EIR | | 3/14/69 | JRC |

HSB ORGIN
FROM I/O CHANNEL OR
PREVIOUS CONTROL UNIT

| | | | |
|---|---|---|---|
| GADINL | XA02-30 | XA03-30 | GADINL |
| GOPINL | XA02-32 | XA03-32 | GOPINL |
| GSTINL | XA02-36 | XA03-36 | GSTINL |
| GSRINL | XA02-38 | XA03-38 | GSRINL |
| GRQINL | XA02-40 | XA03-40 | GRQINL |
| SPARE 1A | XA02-42 | XA03-42 | SPARE 1A |
| SPARE 2A | XA02-44 | XA03-44 | SPARE 2A |
| SPARE 3A | XA02-48 | XA03-48 | SPARE 3A |
| SPARE 4A | XA02-50 | XA03-50 | SPARE 4A |
| G6V4 | XA04-54 | XA01-54 | G6V4 |
| GINPL | XA02-06 | XA03-06 | GINPL |
| GINOL | XA02-08 | XA03-08 | GINOL |
| GINIL | XA02-10 | XA03-10 | GINIL |
| GIN2L | XA02-12 | XA03-12 | GIN2L |
| GIN3L | XA02-14 | XA03-14 | GIN3L |
| GIN4L | XA02-18 | XA03-18 | GIN4L |
| GIN5L | XA02-20 | XA03-20 | GIN5L |
| GIN6L | XA02-24 | XA03-24 | GIN6L |
| GIN7L | XA02-26 | XA03-26 | GIN7L |
| G6V3 | XA03-53 | XA02-53 | G6V3 |
| GADROL | XA01-30 | XA04-30 | GADROL |
| GOPOL | XA01-32 | XA04-32 | GOPOL |
| GCOMOL | XA01-36 | XA04-36 | GCOMOL |
| GSROL | XA01-38 | XA04-38 | GSROL |
| GSUPOL | XA01-40 | XA04-40 | GSUPOL |
| GHOLDOL | XA01-42 | XA04-42 | GHOLDOL |
| GSELOL | XA04-44 | XA01-44 | GSELOL |
| GSELINL | XA04-48 | XA01-48 | GSELINL |
| SPARE 1B | XA01-50 | XA04-50 | SPARE 1B |
| G6V2 | XA04-54 | XA01-54 | G6V2 |
| GOBOL | XA01-06 | XA04-06 | GOBOL |
| GOBOL | XA01-08 | XA04-08 | GOBOL |
| GOBIL | XA01-10 | XA04-10 | GOBIL |
| GOB2L | XA01-12 | XA04-12 | GOB2L |
| GOB3L | XA01-14 | XA04-14 | GOB3L |
| GOB4L | XA01-18 | XA04-18 | GOB4L |
| GOB5L | XA01-20 | XA04-20 | GOB5L |
| GOB6L | XA01-24 | XA04-24 | GOB6L |
| GOB7L | XA01-26 | XA04-26 | GOB7L |
| G6V1 | XA01-53 | XA04-53 | G6V1 |
| GSELOL | XA01-44 | XA04-44 | GSELOL |
| GSELINL | XA01-48 | XA04-48 | GSELINL |

TO NEXT PUNCH UNIT ON THE I/O CHANNEL
HSB DESTINATION 03842953-00

TO NEXT PUNCH UNIT ON THE I/O CHANNEL
HSB DESTINATION 03842954-00

COMPANY CONFIDENTIAL INFORMATION
THIS DOCUMENT CONTAINS CONFIDENTIAL INFORMATION OF THE SPERRY RAND CORPORATION. IN CONSIDERATION OF THE RECEIPT OF THIS DOCUMENT, THE RECIPIENT AGREES NOT TO REPRODUCE, COPY, USE OR TRANSMIT THIS DOCUMENT AND/OR THE INFORMATION THEREIN CONTAINED, IN WHOLE OR IN PART, OR TO SUFFER SUCH ACTION BY OTHERS, FOR ANY PURPOSE, EXCEPT WITH THE WRITTEN PERMISSION, FIRST OBTAINED, OF SPERRY RAND CORPORATION, AND FURTHER AGREES TO SURRENDER SAME TO SPERRY RAND CORPORATION UPON DEMAND.

~~PART NO.~~
IDENT NO. 5028981-00

FOR MATL REQUIREMENTS SEE L/M, L/M REV LETTER CONTROLS DOCUMENT.

UNLESS OTHERWISE SPECIFIED
DIMENSIONS IN INCHES TOL. ON
2 PLACE DECIMALS ± | 3 PLACE DECIMALS ± | ANGLES ±
HOLE DIA. TOL.
0 THRU .250 +.003 −.002 | .251 THRU .500 ±.005 | .501 AND LARGER +.010 −.005
THREADS: EXT. CL 2A, INT CL 2B
COMMODITY CODE

| | | |
|---|---|---|
| LAYOUT | T. MAJSAK | 2/24/69 |
| DRAFTSMAN | T. MAJSAK | 2/28/69 |
| CHECKER | | 4/4/69 |
| ENGINEER | J ECHEMT | 4/24/69 |
| APPROVAL | | |

DO NOT SCALE THIS PRINT

CLASS A

UNIVAC
DIVISION OF SPERRY RAND CORPORATION

TITLE
SCHEMATIC ROW PUNCH
80 COLUMN

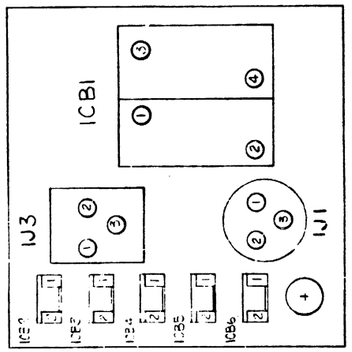
SIZE D | CODE IDENT. NO. | DWG NO. 3837899

SCALE — | WEIGHT | SHEET 5 OF

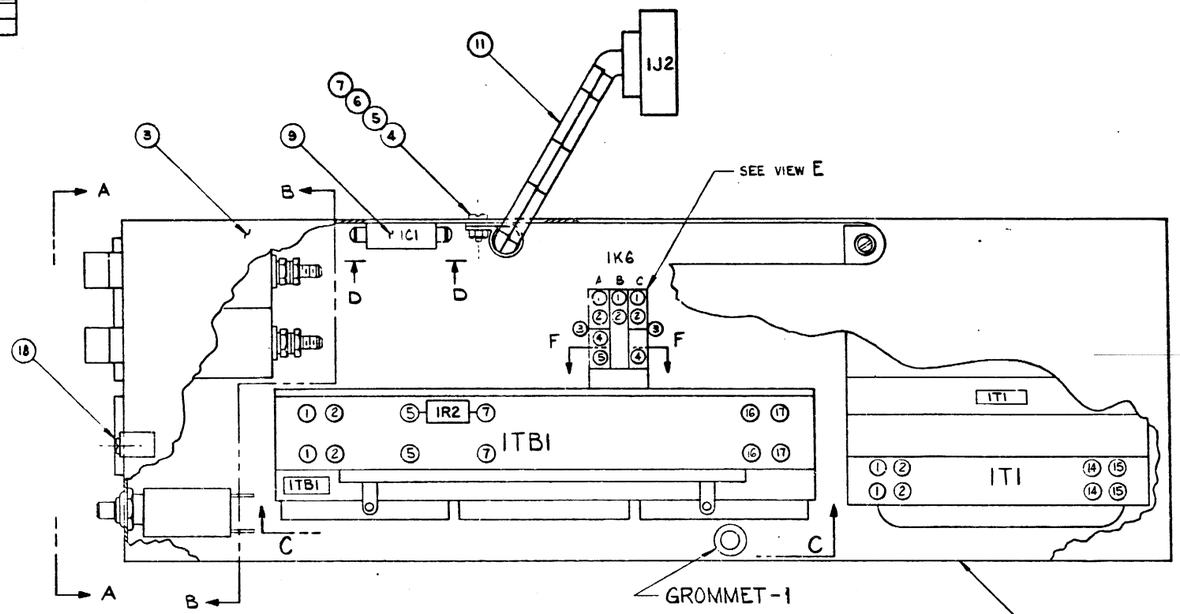
DWG NO. 3837899

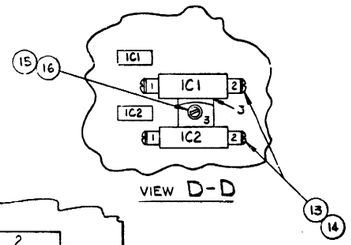
| PART NO. | VARIABLE "A" | VARIABLE "B" | TYPE |
|---|---|---|---|
| 5016950-00 | QTY (0) | QTY (2) | 60~ |
| 5016950-01 | QTY (1) | QTY (0) | 50~ |

| REVISIONS | | | | | | |
|---|---|---|---|---|---|---|
| SYM | ZONE | EIR | DESCRIPTION | CHK | DATE | APPROVED |
| - | | C5717-4 | RELEASED | | 10-15-63 | |
| A | | C6481-1 | SEE EIR | | 6-4-64 | |
| A | | C6551-1 | REL'D DETACHED LIM | | 9-16-64 | |
| D | | C6551-1 | SEE EIR | | 9-16-64 | |

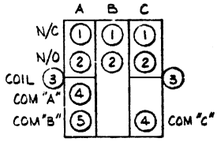



SECTION B-B

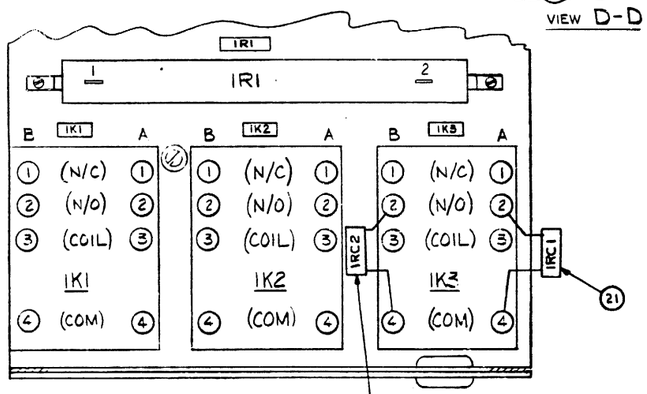



VIEW D-D

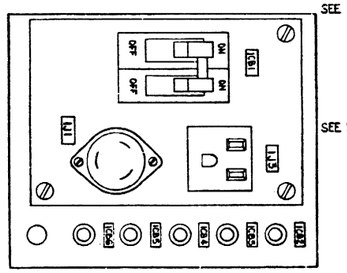



VIEW E




VIEW C-C

SECTION F-F




VIEW A-A

NOTE:
1. [ ] INDICATES LOCATION OF IDENTIFICATION MARKER, SEE FIND 8.

FOR MATERIAL REQUIREMENTS SEE DETACHED LIST OF MATERIAL LM 5016950

REVISION LETTER IN LWR RH CORNER APPLIES TO PICTORIAL SHT (S) LM REV LETTER CONTROLS DOCUMENT

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| SEE 5016951-00 | A | 20 | | | - | 73341081-06 | JUMPER |
| SEE 5016951-00 | B | 19 | | | B | 5018488-00 | JUMPER ASSY |
| | 1 | 18 | | | - | 71065703-00 | SCREW-PAN HD, #6-32 x 1/4 LG |
| | 1 | 17 | | | - | 73341080-00 | JUMPER |
| | 1 | 16 | | | - | 4912550-01 | WASHER-LOCK, SPLIT, #6 |
| | 1 | 15 | | | - | 4912524-01 | SCREW-PAN HD, #6-32 x 5/16 LG |
| | 4 | 14 | | | A | 00547-10 | WASHER-LOCK, EXT. TOOTH #10 |
| | 4 | 13 | | | A | 71051103-00 | SCREW-MACH., BD HD, #10-32 x 1/4 LG |
| | REF | 12 | | | D | 5016951-00 | DIST. BOX, INPUT-WIRING |
| | 1 | 11 | | | E | 5016943-00 | HARNESS-DIST. BOX |
| SEE 5016951-00 | 1 | 10 | 1R2 | | B | 5012541-00 | RESISTOR ASSY-75Ω, 2W |
| | 2 | 9 | 1C1, 1C2 | | B | 50 2558-00 | CAPACITOR-0.1 MFD, 250 WVAC |
| | A/R | 8 | | | B | 5016952-00 | MARKERS, IDENT.-DISTR. BOX |
| | 1 | 7 | | | - | 71410620-00 | NUT-PLAIN, HEX, #6-32 |
| | 1 | 6 | | | - | 71510610-00 | WASHER-FLAT, #6 |
| | 1 | 5 | | | - | 71065607-00 | SCREW-PAN HD, 6-32 x 1/2 LG |
| | 1 | 4 | | | A | 72400105-00 | HANGER, CABLE |
| | 1 | 3 | | | D | 5012321-00 | HOOD ASSY-TL. BOX |
| | 1 | 2 | | | D | 5016943-00 | DISTRIBUTION, INPUT, ASSY |
| | 1 | 1 | | | | SEE TAB | DIST BOX, INPUT, ASSY-WIRED |
| QTY REQD | FIND | REF DES | | CODE IDENT | DWG SIZE | PART OR IDENTIFYING NO | NOMENCLATURE OR DESCRIPTION |

LIST OF MATERIAL

PART NO.-SEE TAB

| | | |
|---|---|---|
| 00 | 5012532-01 | TYPE 2011 |
| 00 | 5012532-00 | TYPE 2009 |
| NEXT ASSY | | EQUIPMENT |
| APPLICATION | | |

UNLESS OTHERWISE SPECIFIED
ALL DIMENSIONS IN INCHES
TOLERANCE ON FRACTIONS ± DECIMALS ± ANGLES ±
DECIMAL HOLE DIAMETER TOLERANCE
0 THRU .250 +.003 −.002; .251 THRU .500 +.005 −.003; .501 & LARGER +.010 −.005
THREADS EXT CL 2A, INT CL 2B
MATERIAL
FINISH

LAYOUT Karl W. Och 11-13-63
DRAFTSMAN KARL W. OCH 11-15-63
CHECKER D. Shannon 11-15-63
ENGINEER
APPROVAL

CLASS A

Remington Rand Univac
DIVISION OF SPERRY RAND CORPORATION

TITLE
DISTRIBUTION BOX, INPUT, ASSEMBLY-WIRED

CODE IDENT NO | SIZE D | DWG NO 5016950
SCALE NONE | SHEET 1 OF 1

DWG NO 5016950

THIS DOCUMENT CONTAINS CONFIDENTIAL INFORMATION OF THE REMINGTON RAND DIVISION OF SPERRY RAND CORPORATION AND IS FURNISHED PURSUANT TO THE FOLLOWING INSTRUMENT

ON THE UNDERSTANDING THAT THIS DOCUMENT AND THE INFORMATION THEREIN MAY NOT BE DEALT WITH IN ANY MANNER EXCEPT FOR THE PURPOSES OF THAT INSTRUMENT OR AS OTHERWISE PERMITTED IN WRITING BY THE REMINGTON RAND DIVISION OF SPERRY RAND CORPORATION

DO NOT SCALE THIS PRINT

**DETACHED LIST OF MATERIAL** — TITLE OF DRAWING FROM WHICH DETACHED: DIST. BOX INPUT ASSY-#IRED — LM — DWG NO 5016950 — REV D E* — ISSUE NO 1 — SHEET 1

ENG PROJ CODE 10 | UNIT OF MEASURE | DWG SIZE D | MFG PROJ CODE | L/M CLASS A | DCL C | CODE IDENT NO | PIC REV DA

UNIVAC — Division of Sperry Rand Corporation

JAN. 10,68 LIST OF MATERIAL

| QTY REQD | MFG QTY | MFG U/M | FIND | REFERENCE DES A | B | C | CODE IDENT | SIZE | IDENTIFICATION INFO PART OR IDENT NO DWG NO | DASH | NOMENCLATURE OR DESCRIPTION | DCL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | -4 | | | | | | | | PT NO. 5016950 00 THRU 01 | |
| 1 | | | 2 | - - - | - - - | - - - | - - | D | 5016947 | 00 | DISTRIBUTION INPUT ASSY | C |
| 1 | | | 3 | - - - | - - - | - - - | - - | D | 5012321 | 00 | HOOD ASSY UL BOX | C |
| 1 | | | 4 | - - - | - - - | - - - | - - | A 7 | 2400105 | 00 | HANGER, CABLE, NYLON .33 ID | H |
| 1 | | | 5 | - - - | - - - | - - - | - - | A 7 | 1080607 | 00 | SCR,MACH,SLOTTED DRIVE PAN HD 6-32 THD. 1/2 LG.STEEL CAD PL | H |
| 1 | | | 6 | - - - | - - - | - - - | - - | A 7 | 1510610 | 00 | WASHER, FLAT NO. 6 STEEL CAD. OR ZINC PLATE | H |
| 1 | | | 7 | - - - | - - - | - - - | - - | A 7 | 1410620 | 00 | NUT,PLAIN,HEX,STL,NICKEL PL. 6-32 | H |
| AR | | | 8 | - - - | - - - | - - - | - - | B | 5016952 | 00 | MARKERS,IDENTIFICATION DISTRIBUTION BOX | C |
| 2 | | | 9 | 1C1 | 1C2 | | | A | 3005935 | 00 | CAPACITOR, FIXED PAPER DIEL .1UF, 250V-50/60CPS, 40AMP | H * |
| 1 | | | 10 | 1R2 | | | | B | 5026804 | 00 | RESISTOR ASSEMBLY - TERMINAL LUG 51 OHM 2 WATT | C |
| 1 | | | 11 | - - - | - - - | - - - | - - | E | 5016949 | 00 | HARNESS DISTRIBUTION BOX | C |

FORM #A 1648 V (REV. 6/63)

**DETACHED LIST OF MATERIAL** — TITLE OF DRAWING FROM WHICH DETACHED: DIST. BOX INPUT ASSY-#IRED — LM — DWG NO 5016950 — REV D E* — ISSUE NO 1 — SHEET 3

ENG PROJ CODE 10 | UNIT OF MEASURE | DWG SIZE D | MFG PROJ CODE | L/M CLASS A | DCL C | CODE IDENT NO | PIC REV DA

UNIVAC — Division of Sperry Rand Corporation

JAN. 10,68 LIST OF MATERIAL

| QTY REQD | MFG QTY | MFG U/M | FIND | REFERENCE DES A | B | C | CODE IDENT | SIZE | IDENTIFICATION INFO PART OR IDENT NO DWG NO | DASH | NOMENCLATURE OR DESCRIPTION | DCL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Z03 | - - - | - - - | - - - | - - | | C 8995 | 01 | L/M B PIC A REV HISTORY | |
| | | | Z04 | - - - | - - - | - - - | - - | | H 19288 | 03 | L/M C PIC A REV HISTORY | * |
| | | Δ | Z05 | - - - | - - - | - - - | - - | | C10391 | 01 | L/M D PIC D REV HISTORY | |
| - - | - - - | - - | - - - | - - - | - - - | - - - | - - - | - | - - - - | - - - - | 5016950 00 VARIABLE DATA | |
| 2 | | | 19 | - - - | - - - | - - - | - - | B | 5018488 | 00 | JUMPER ASSY | C |
| - - | - - - | - - | - - - | - - - | - - - | - - - | - - - | - | - - - - | - - - - | 5016950 01 VARIABLE DATA | |
| 1 | | | 20 | - - - | - - - | - - - | - - | A 7 | 3341081 | 00 | LEAD ELECTRICAL- JUMPER, BRASS FOR BARRIER STRIPS | H |

M. Hurley

SHEET 3 OF 3 FORM #A 1648 V (REV 6/63)

**DETACHED LIST OF MATERIAL** — TITLE OF DRAWING FROM WHICH DETACHED: DIST. BOX INPUT ASSY-#IRED — LM — DWG NO 5016950 — REV D E* — ISSUE NO 1 — SHEET 2

ENG PROJ CODE 10 | UNIT OF MEASURE | DWG SIZE D | MFG PROJ CODE | L/M CLASS A | DCL C | CODE IDENT NO | PIC REV DA

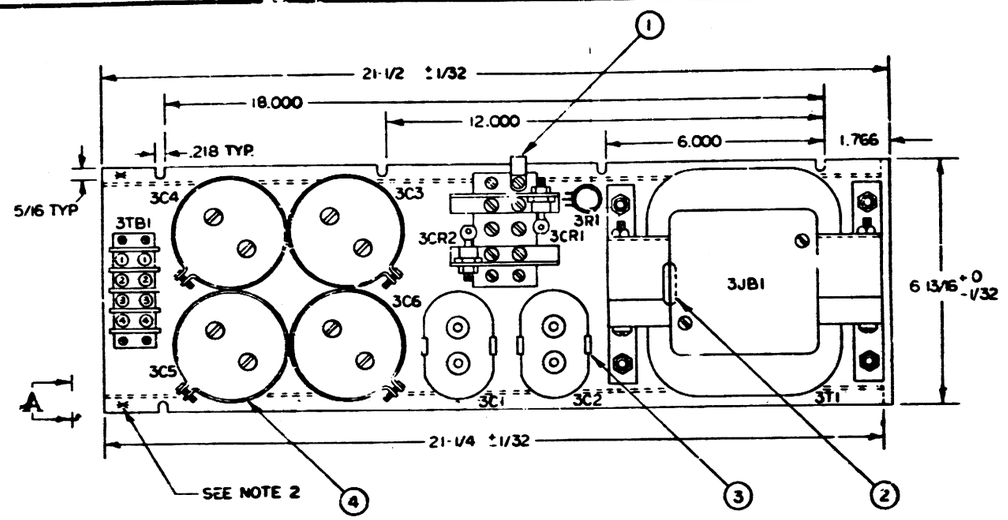
UNIVAC — Division of Sperry Rand Corporation

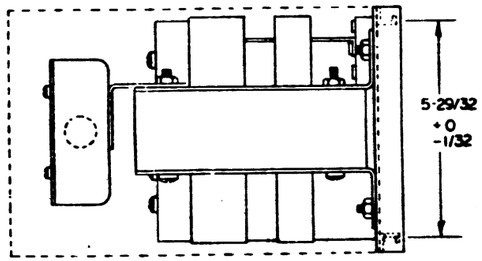
JAN. 10,68 LIST OF MATERIAL

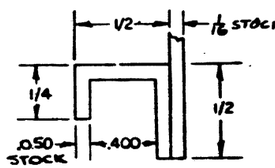
| QTY REQD | MFG QTY | MFG U/M | FIND | REFERENCE DES A | B | C | CODE IDENT | SIZE | IDENTIFICATION INFO PART OR IDENT NO DWG NO | DASH | NOMENCLATURE OR DESCRIPTION | DCL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 4 | | | 13 | - - - | - - - | - - - | - - | A 7 | 1051103 | 00 | SCREW MACH BIND HD SLOTTED 10-32 THD 1/4 LG STL CAD PL | H |
| 4 | | | 14 | - - - | - - - | - - - | - - | | 547 | 10 | MISSING PART NO. | * |
| 1 | | | 15 | - - - | - - - | - - - | - - | C | 4912524 | 01 | SCREW MACH-PAN HD SLOT. CRES 0.312 LG 6-32 UNC-2A | H |
| 1 | | | 16 | - - - | - - - | - - - | - - | C | 4912550 | 01 | WASHER LOCK (SPRING) HELICAL NO. 6 | H |
| 1 | | | 17 | - - - | - - - | - - - | - - | A 7 | 3341080 | 00 | JUMPER 2 POS FOR STRIP TYPE NO. 142 | H |
| 1 | | | 18 | - - - | - - - | - - - | - - | B 7 | 1085703 | 00 | SCREW MACH PAN HD SLOT DR. CRES #6-32X1/4 LONG | H |
| | | | 19 # | - - - | - - - | - - - | - - | | | | VARIABLE-SEE BELOW | |
| | | | 20 # | - - - | - - - | - - - | - - | | | | VARIABLE-SEE BELOW | |
| 2 | | Δ | 21 | 1RC1 | 1RC2 | - - - | - - | | 5078885 | 00 | RESISTOR CAPACITOR ASS'Y | |
| | | | R01 | - - - | - - - | - - - | - - | D | 5016951 | 00 | DISTRIBUTION BOX INPUT-#IRING | C |
| | | | Z01 | - - - | - - - | - - - | - - | | C 4481 | 01 | L/M PIC A REV HISTORY | |
| | | | Z02 | - - - | - - - | - - - | - - | | C 6565 | 05 | L/M A PIC A REV HISTORY | |

FORM #A 1648 V (REV 6/63)

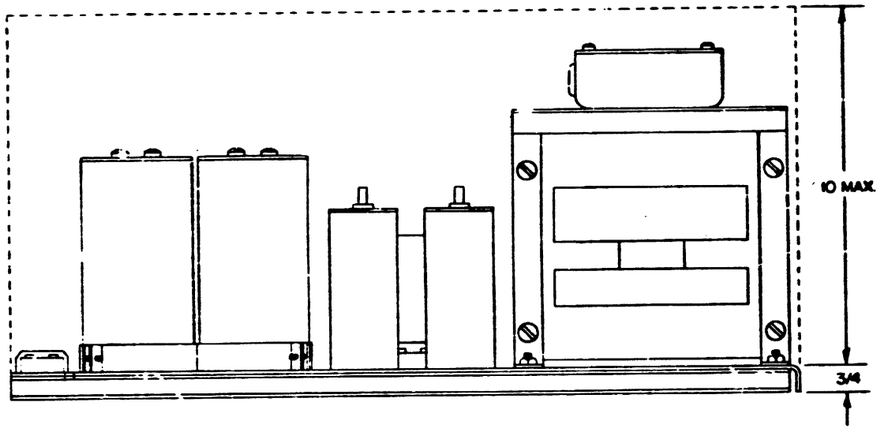
| REVISIONS | | | | | | |
|---|---|---|---|---|---|---|
| SYM | ZONE | E.O. | DESCRIPTION | ENG | DATE | APPROVED |
| | | C4125 -36 | REDRAWN NO CHG LAST REV. D EIR C8960-1 | | 2-2-67 | TTS |
| D | | 9323-1 | SEE EIR | | 3/1/67 | |
| E | | 9594-1 | SEE EIR | | 4/4/67 | |
| F | | 1.5744-1 | SEE EIR | | 7-11-67 | |



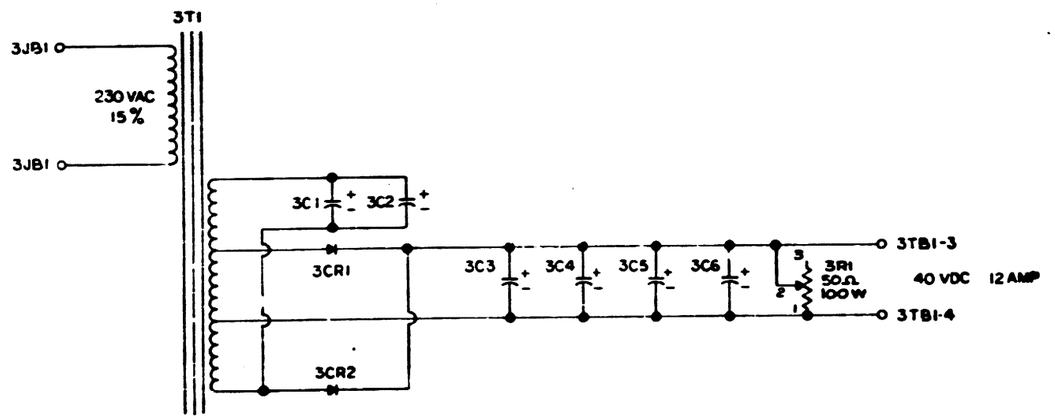




VIEW A




NOTES:

1. UNIT SHALL MEET THE ELECTRICAL REQUIREMENTS OF SPECIFICATION (89)
2. SPOT WELD RAILS EVERY 2 INCHES
3. MARKINGS: UNIVAC PART NO., REVISION LEVEL, MFG. NAME & COMPONENT REFERENCE NO'S. TO AGREE WITH SCHEMATIC SHALL BE TYPOGRAPHICALLY INDICATED.
4. COMPONENT PARTS MUST AGREE WITH PARTS LIST.
5. CHECK FOR STATIC ELECTRIC BUILD UP ON AC CAPACITORS AND SWITCH TRANSFORMER LEADS TO ELIMINATE IT IF NECESSARY.




UNIVAC IDENT. NO. 5018174-00

SOURCE OF SUPPLY SEE AVL

FOR MATERIAL REQUIREMENTS SEE DETACHED LIST OF MATERIAL
LM 5018174

REVISION LETTER IN LWR RH CORNER APPLIES TO PICTORIAL SHT 1
LM REV LETTER CONTROLS DOCUMENT

| QTY REQD | FIND | REF DES | CODE IDENT | DWG SIZE | PART OR IDENTIFYING NO. | NOMENCLATURE OR DESCRIPTION |
|---|---|---|---|---|---|---|

REPLACEABLE LIST OF MATERIAL

| | | | | |
|---|---|---|---|---|
| A | V-1704-00 | SLPE Block | | |
| B | 5012532-01 | TYPE 2011 | | |
| C | 5012532-00 | TYPE 2009 | | |
| D | NEXT ASSY | EQUIPMENT | | |
| APPLICATION | | | | |

UNLESS OTHERWISE SPECIFIED
ALL DIMENSIONS IN INCHES
TOLERANCE ON FRACTIONS ±1/32 DECIMALS .XX ±.010 .XXX ANGLES ±1°
DECIMAL HOLE DIAMETER TOLERANCE
0 THRU .099 +.003 −.002; .100 THRU .999 +.005 −.003; 1.000 & LARGER +.010 −.005
THREADS EXT CL 2A, INT CL 2B
MATERIAL PURCHASE
FINISH

LAYOUT R STEELE 12/11/65
DRAFTSMAN R STEELE 12/12/65
CHECKER
ENGINEER
APPROVED J Klaar 12-8-65

CLASS A
Remington Rand Univac
TITLE SPECIFICATION CONTROL DRAWING
POWER SUPPLY 60 CYCLE ±40V
CODE IDENT NO.
SIZE D
DWG NO. 5018174
SCALE NONE
SHEET 1 OF 1

DO NOT SCALE THIS PRINT

DWG NO 5018174 B

UNIVAC

PARTS LIST | CODE IDENT 92120 | ISSUE DATE 06/13/69 | CONTROL C ES | CA | TYPE V | COMM CODE | ST A | PL | DWG NO 501A174 | SHEET 1 | PL REV F

TITLE OF DRAWING FROM WHICH DETACHED: POWER SUPPLY 60 CYCLE +-40V | CL A | U/M EA | 1 | DWG SIZE D | RANGE 00 THRU 00 | ISSUE 1 | PIC REV F

| FIND NO | QUANTITY REQUIRED | U/M | V/I | PART OR IDENT NO DRAWING NO | DASH | NOMENCLATURE OR DESCRIPTION | S/P | C H G |
|---|---|---|---|---|---|---|---|---|
| 1 | 1 | EA | A | 72400109 | -00 | CLAMP, LOOP | | |
| 2 | 1 | EA | B | 5013792 | -00 | GROMMET, NEOPRENE | | |
| 3 | 4 | EA | B | 5016941 | -00 | CLAMP, HOOK OVER | | |
| 4 | 4 | EA | B | 5016940 | -00 | CONDENSER BRKT INSIDE DIA. 3.06 | | |
| 5 | 1 | EA | C | 3155736 | -18 | TERMINAL BOARD, BARRIER 4 TERMINALS 3.219 L6 | | |
| | | | | REF DES | 1 | 3TB1 | | |
| 6 | 1 | EA | A | 900990 | -00 | JUNCTION BOX, 4 IN SQ X 1 1/2 DEEP GALV STL ZINC OR CAD PL | | |
| | | | | REF DES | 1 | 3JB1 | | |
| 7 | 2 | EA | B | 5013883 | -00 | SEMI-CONDUCTOR DEVICE | | |
| | | | | REF DES | 1 | 3CR1 3CR2 | | |
| 8 | 4 | EA | B | 5010565 | -00 | CAPACITOR, FIXED ELECTROLYTIC | | |
| | | | | REF DES | 1 | 3C3 THRU 3C6 | | |
| 9 | 1 | EA | C | 5012534 | -00 | TRANSFORMER, POWER REGULATOR | | |
| | | | | REF DES | 1 | 3T1 3C1 3C2 | | |
| 10 | 1 | EA | A | 77550052 | -00 | RESISTOR ADJ. W. W. 100WATTS +-10% 1.41AMPS 50 OHMS | | |
| | | | | REF DES | 1 | 3R1 | | |
| S01 | | XX | | CS01986 | | 1004 PUNCH POWER SUPPLY SPEC. TYPE 2009 & 2011 -40V 60CYCLE | | |
| Z01 | | | | C 4369 | 01 | EIR HISTORY: EIR REV , PL REV , PIC REV A | | |
| Z02 | | | | C 6565 | 05 | EIR HISTORY: EIR REV , PL REV A, PIC REV A | | |
| Z03 | | | | C 8960 | 01 | EIR HISTORY: EIR REV , PL REV B, PIC REV B | | |

UNIVAC

PARTS LIST | CODE IDENT 92120 | ISSUE DATE 06/13/69 | CONTROL C ES | CA | TYPE V | COMM CODE | ST A | PL | DWG NO 501A174 | SHEET 2 | PL REV F

TITLE OF DRAWING FROM WHICH DETACHED: POWER SUPPLY 60 CYCLE +-40V | CL A | U/M EA | 1 | DWG SIZE D | RANGE 00 THRU 00 | ISSUE 1 | PIC REV F

| FIND NO | QUANTITY REQUIRED | U/M | V/I | PART OR IDENT NO DRAWING NO | DASH | NOMENCLATURE OR DESCRIPTION | S/P | C H G |
|---|---|---|---|---|---|---|---|---|
| Z04 | | | | C 4125 | 36 | EIR HISTORY: EIR REV , PL REV B, PIC REV B | | |
| Z05 | | | | H 18381 | 07 | EIR HISTORY: EIR REV , PL REV C, PIC REV B | | |
| Z06 | | | | C 9383 | 01 | EIR HISTORY: EIR REV , PL REV D, PIC REV D | | |
| Z07 | | | | C 9599 | 01 | EIR HISTORY: EIR REV , PL REV E, PIC REV E | | |
| Z08 | | | | C 11574 | 01 | EIR HISTORY: EIR REV , PL REV F, PIC REV F | | |

| PART NO. | FEATURE NO. | APPLICATION MOD. V |
|---|---|---|
| 3617566-00 | F1174-00 | CARD DECK 3842947, REV. M & ON |
| 3617566-01 | F1174-01 | CARD DECK 3842947, REV. -THRU L |

| REVISIONS | | | | | | |
|---|---|---|---|---|---|---|
| ZONE | LTR | EIR | DESCRIPTION – FOR DETAILS SEE EIR | L-MK | DATE | APPROVED |
| | - | H20543-1 | SPEC PROD REL. PT-00 | WJ | 3-18-69 | |
| | A | H19458-1 | RELEASE PT-01-SEE E.I.R | JC | 6-18-69 | |

(PART 01 ONLY)

**CHART 1**

| ORIG. | DEST. | LEV. |
|---|---|---|
| VC1913 | VC4113 | 2 |
| VC4114 | VC4108 | 2 |
| VF2804 | VE2808 | 2 |
| VE3007 | VC4115 | 2 |
| VE1117 | VC4109 | 2 |
| VC4117 | VB4202 | 2 |
| VC4101 | VB4215 | 2 |
| VB4418 | VC4104 | 2 |
| VB4314 | VB4007 | 2 |
| VC4102 | VB1816 | 2 |
| VB1808 | VB1801 | 2 |
| VB1802 | VB1902 | 2 |
| VC4215 | VC4212 | 2 |
| VC4214 | VC4503 | 2 |
| VC3108 | VC3116 | 2 |
| VB4206 | VC4103 | 2 |
| | | |

(PART 01 ONLY)

**CHART 2**

| ORIG. | DEST. | LEV. |
|---|---|---|
| VC4113 | VC4107 | 1 |
| VF2804 | VC4114 | 1 |
| VB4007 | VC4105 | 1 |
| VC4215 | VB1815 | 1 |
| VC4214 | VB1814 | 1 |
| VB1812 | VB0801 | 1 |
| VB1913 | VA0815 | 1 |
| VB1914 | VA0913 | 1 |
| VC3116 | VB4216 | 1 |
| | | |

(PART -01 ONLY)

**CHART 3**

| ORIG. | DEST. | LEV. |
|---|---|---|
| VE2808 | VC2804 | 2 |
| VB4314 | VB4007 | 2 |
| VC4215 | VC4212 | 2 |
| VC4214 | VC4503 | 2 |
| VC3108 | VC3116 | 2 |
| | | |

(PART -00 & -01)

**CHART 4**

| TYPE | LOC. | FIND NO. |
|---|---|---|
| S74 | VB19 | 1 |
| B51 | VC41 | 2 |
| B76 | VB18 | 3 |

INSTRUCTIONS:

PART -00 & -01

1. ADD P.C. CARDS ACCORDING TO CHART 4.

PART -01 ONLY

1. DELETE WIRES ACCORDING TO CHART 3.
2. ADD WIRES ACCORDING TO CHARTS 1 & 2.

COMPANY CONFIDENTIAL INFORMATION

THIS DOCUMENT CONTAINS CONFIDENTIAL INFORMATION OF THE SPERRY RAND CORPORATION. IN CONSIDERATION OF THE RECEIPT OF THIS DOCUMENT, THE RECIPIENT AGREES NOT TO REPRODUCE, COPY, USE OR TRANSMIT THIS DOCUMENT AND/OR THE INFORMATION THEREIN CONTAINED, IN WHOLE OR IN PART, OR TO SUFFER SUCH ACTION BY OTHERS, FOR ANY PURPOSE, EXCEPT WITH THE WRITTEN PERMISSION, FIRST OBTAINED, OF SPERRY RAND CORPORATION, AND FURTHER AGREES TO SURRENDER SAME TO SPERRY RAND CORPORATION UPON DEMAND.

UNLESS OTHERWISE SPECIFIED
DIMENSIONS IN INCHES TOL. ON 2 PLACE DECIMALS ±, 3 PLACE DECIMALS ±, ANGLES ±
HOLE DIA. TOL.
0 THRU .250 + .003 − .002
.251 THRU .500 + .005 − .003
.501 AND LARGER + .010 − .005
THREADS: EXT. CL 2A, INT CL 2B
COMMODITY CODE

PART NO. SEE TAB. SHEET 3.

FOR MATL REQUIREMENTS SEE L/M, L/M REV LETTER CONTROLS DOCUMENT.

DO NOT SCALE THIS PRINT

| | | |
|---|---|---|
| LAYOUT | J.P. FLACH | DATE 3-17-69 |
| DRAFTSMAN | T. PISYCHAK | 3-17-69 |
| CHECKER | [illegible] | 3-18-69 |
| ENGINEER | J.J. Hails | 3-20-69 |
| APPROVAL | [illegible] | 4-2-69 |
| | [illegible] | 5-1-69 |

CLASS A

UNIVAC
DIVISION OF SPERRY RAND CORPORATION

TITLE
CARD EDGE NOTCH
FEATURE F-1174-00 & -01

SIZE D | CODE IDENT. NO. | DWG NO. 3617566

SCALE | WEIGHT | SHEET 1 OF 1

DWG NO. 3617566

# SERVICING DIAGRAM SECTION INDEX

INDEX TITLE: PRINTED CIRCUIT BOARDS

INDEX NUMBER: BASIC TYPE NO. 0604 — INDEX VAR. NO. 3

INDEX VAR. REV. D — SHEET 1 OF 3

TYPE NO. VARIATION USAGE

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 00 | | | | | | | | |
| 01 | | | | | | | | |

| L/N | SHEET | DOCUMENT NUMBER | TITLE | DOCUMENT REVISION LEVEL 1 2 3 4 5 6 7 8 9 |
|---|---|---|---|---|
| X | - | 3610092 | Component Assy. | D D D D D D D E |
| - | - | 3610092 | " " | D D D D D D D E |
| | | | | |
| X | - | 3613235 | Component Assy. | - - - - - - - - |
| - | - | 3613235 | " " | - - - - - - - - |
| | | | | |
| X | - | 3614370 | Component Assy. | - - - - - - - - |
| - | - | 3614370 | " " | - - - - - - - - |
| X | - | 3614371 | Component Assy. | - - - - - - A A |
| - | - | 3614371 | " " | - - - - - - - - |
| X | - | 3614532 | Component Assy. | B C |
| - | 1 | 3614532 | " " | - A B B B B B C |
| - | 2 | 3614532 | " " | - - B B B B B C |
| X | - | 3614533 | Comp. Assy. HSB Receiver | - - |
| - | 1 | 3614533 | " " " " | - - - - - - - - |
| X | - | 3614534 | Comp. Assy. HSB Term. | A A |
| - | 1 | 3614534 | " " " " | - - - - A A A A |
| X | - | 3614535 | Comp. Assy. HSB Driver | A A |
| - | 1 | 3614535 | " " " " | - - - A A A A A |
| | | | | |
| | | | | |
| X | - | 3615487 | Comp. Assy. HSB Receiver | - A A A A A A A A |
| - | - | 3615487 | " " " " | - A A A A A A A A |
| X | - | 3615488 | Comp. Assy. HSB Driver | A A A A A A A A A |
| - | - | 3615488 | " " " " | - - - - - - - - - |
| | | | | |
| X | - | 3615595 | Comp. Assy. Probe Propagation | - - - - - - - - - |
| - | 1 | 3615595 | " " " " | - - - - - - - - - |
| - | 2 | 3615595 | " " " " | - - - - - - - - - |
| X | - | 3615597 | Component Assy. | A A A A A A A A A |
| - | - | 3615597 | " " | - - - - - - - - - |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

APPROVALS

| FED | DATE | MFG. ENG. | DATE | DESIGN ENG. | DATE |
|---|---|---|---|---|---|
| | | | | | |

UD4 - 5086 R1

# SERVICING DIAGRAM SECTION INDEX

INDEX TITLE: PRINTED CIRCUIT BOARDS

INDEX NUMBER: BASIC TYPE NO. 0604 — INDEX VAR. NO. 3

INDEX VAR. REV. D — SHEET 2 OF 3

TYPE NO. VARIATION USAGE

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 00 | | | | | | | | |
| 01 | | | | | | | | |

| L/N | SHEET | DOCUMENT NUMBER | TITLE | DOCUMENT REVISION LEVEL 1 2 3 4 5 6 7 8 9 |
|---|---|---|---|---|
| X | - | 4031703 | Core Array and Sense Amplif. | F F F F F H H |
| - | 1 | 4031703 | " " " " " | D D D D D H H |
| - | 2 | 4031703 | " " " " " | D D D D D D D |
| X | - | 4031707 | B-1 Directional Switch Assy. | A A A A A B B |
| - | - | 4031707 | " " " " | A A A A A A A |
| X | - | 4031710 | Read-Write Inhibit & Line Sw. | A A A A A A A |
| - | - | 4031710 | " " " " " | A A A A A A A |
| | | | | |
| | | | | |
| X | - | 5012358 | Neg. Input Amplifier Assy. | G G G G G G H H |
| - | - | 5012358 | " " " " | G G G G G G G G |
| X | - | 5012368 | Clock Circuits Assy. | G G G G G G J J |
| - | 1 | 5012368 | " " " | G G G G G G G G |
| - | 2 | 5012368 | " " " | G G G G G G G G |
| | | | | |
| X | - | 5012372 | Neg. Input Flip Flop Assy. | F F F F F F F F |
| - | - | 5012372 | " " " " " | F F F F F F F F |
| X | - | 5012376 | AC Flip Flop Assy. | C C C C C C D E |
| - | - | 5012376 | " " " " | C C C C C C C E |
| | | | | |
| X | - | 5012378 | Positive Amplifier Assy. | E E E E E E F F |
| - | - | 5012378 | " " " | E E E E E E E E |
| X | - | 5012384 | GATE I (TYPE I) Assy. | E E E E E E E E |
| - | - | 5012384 | " " " | E E E E E E E E |
| | | | | |
| | | | | |
| X | - | 5012386 | GATE IB (TYPE 1) Assy. | D D D D D D D D |
| - | - | 5012386 | " " " " | D D D D D D D D |
| X | - | 5012388 | GATE 3 (TYPE 3) Assy. | F F F F F F F F |
| - | - | 5012388 | " " " | F F F F F F F F |
| | | | | |
| X | - | 5012392 | Punch Shift Driver Assy. | E E E E E E E E |
| - | - | 5012392 | " " " " | E E E E E E E E |
| X | - | 5012398 | Positive Amplifier (2) Assy. | E E E E E E F F |
| - | - | 5012398 | " " " " | E E E E E E E E |

APPROVALS

| FED | DATE | MFG. ENG. | DATE | DESIGN ENG. | DATE |
|---|---|---|---|---|---|
| | | | | | |

# SERVICING DIAGRAM SECTION INDEX

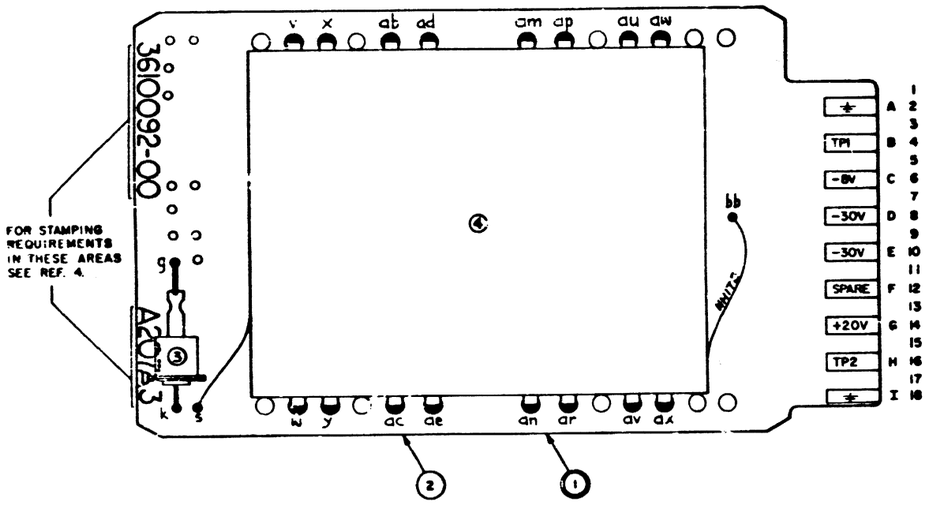
| INDEX TITLE | INDEX NUMBER | |
|---|---|---|
| PRINTED CIRCUIT BOARDS | BASIC TYPE NO. | INDEX VAR NO. |
| | 0604 | 3 |
| TYPE NO. VARIATION USAGE | INDEX VAR REV | SHEET OF |
| 00 | D | 3 3 |
| 01 | | |

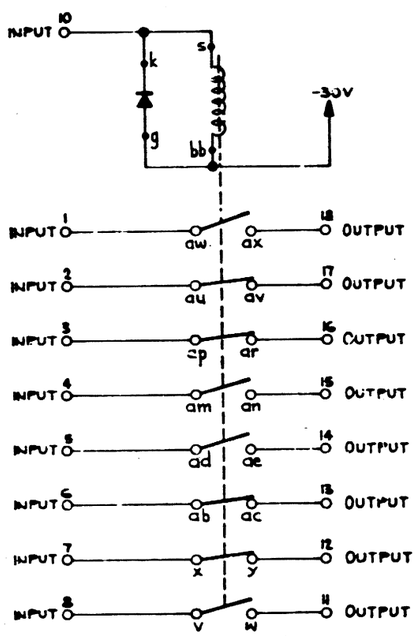
| L/M | SHEET | DOCUMENT NUMBER | TITLE | DOCUMENT REVISION LEVEL 1 2 3 4 5 6 7 8 9 |
|---|---|---|---|---|
| X | - | 5012400 | Double Power Pos. Amp. Assy. | D D D D D D D D |
| - | - | 5012400 | " " " " " | D D D D D D D D |
| X | - | 5012416 | Adder Assy. | D D D D D E E |
| - | - | 5012416 | " " | D D D D D D D |
| X | - | 5012420 | Prt. Paper Feed Spkt. Amp. Assy | F F F F F G G |
| - | - | 5012420 | " " " " " " | F F F F F F F |
| X | - | 5012430 | Power Driver Assy. | L L L L L L M M |
| - | - | 5012430 | " " " | L L L L L L L L |
| X | - | 5012438 | Storage FF II Assy. | G G G G G G H J |
| - | 1 | 5012438 | " " " " | G G G G G G G J |
| - | 2 | 5012438 | " " " " | G G G G G G G G |
| - | 3 | 5012438 | " " " " | G G G G G G G G |
| X | - | 5012458 | Driver Integrator Assy. | H H H H H H H L |
| - | - | 5012458 | " " " | H H H H H H H L |
| X | - | 5012462= | Photo Cell Amp. Assy. | G G G G G G J J |
| - | - | 5012462 | " " " " | G G G G G G G G |
| X | - | 5014860 | Long Delay Card Assy. | D D D D D F F F |
| - | - | 5014860 | " " " " | C C C C C F F F |
| X | - | 5020185 | Component Assy. | L L L L L L L L |
| - | 1 | 5020185 | " " | L L L L L L L L |
| - | 2 | 5020185 | " " | K K K K K K K K |
| X | - | 5020197 | Component Assy. | B B B B B B B B |
| - | 1 | 5020197 | " " | A A A A A A A A |
| - | 2 | 5020197 | " " | - - - - - - - - |
| - | 3 | 5020197 | " " | A A A A A A A A |
| X | - | 3617460 | S-74 (F1174) | A A A A |
| - | - | 3617460 | " " | A A A A |

| APPROVALS | | |
|---|---|---|
| FED DATE | MFG. ENG. DATE | DESIGN ENG DATE |
| | | |

| REVISIONS | | | | | | |
|---|---|---|---|---|---|---|
| LTR | | E.O. | DESCRIPTION | BY | DATE | APPROVED |
| - | | H9860-1 | DEVELOPMENT RELEASE OF PT-00 S MCQUADE | | 6-12-62 | |
| A | | H9860-6 | SEE EIR | | 8-15-62 | |
| B | | H9860-70 | SEE EIR | | 4-8-63 | |
| B | | H5318-1 | FINAL RELEASE OF PT-00 | | | |
| C | | H5248-3 | SEE EIR | | | |
| D | | H5880-3 | DETACHED LIST OF MATERIAL | | | |
| E | | H5670-1 | SEE EIR | | | |

NO. OF CARD SPACES REQUIRED
TWO (2)




BLOCK SYMBOL

USE SCHEMATIC

**NOTE:**
THIS CARD WILL BE DESCRIBED AS A CONNECTOR FOR ACD TRANSCRIPTION IF NECESSARY.

| | | | |
|---|---|---|---|
| 4 | TEST SPEC. | (S04) | |
| 4 | ASS'Y SPEC. | H (S01) | |
| 3 | MANUFACTURING SPEC. | (S02) | |
| 2 | SOLDER SPEC. | (S03) | |
| 1 | PRINTED CIRCUIT BD. STD. | (R01) | |
| | REFERENCES | | |

FOR MATERIAL REQUIREMENTS SEE DETACHED LIST OF MATERIAL
LM 3610092
REVISION LETTER IN LWR RH CORNER APPLIES TO PICTORIAL SHT 1
LM REV LETTER CONTROLS DOCUMENT

PT. NO. 3610092-00

| | | | |
|---|---|---|---|
| 02 | D3W2013-00 | 6010 | |
| 00 | D3612056-00 | 0900 | |
| 00 | D3610541-00 | 0500 | |
| PT | NEXT ASSY | EQUIP | |
| | APPLICATION | | |

| | | |
|---|---|---|
| DRAWN | B. PIAZZA | 5-11-62 |
| CHK'D | V. Snaptys | 5-11-62 |
| ENGR | | |
| ENGR | | |
| APPD | | 6-18-62 |

MATERIAL
FINISH
HOLES EXT CLEARANCE CL 2B

FOR MATERIAL REQUIREMENTS SEE DETACHED LIST OF MATERIAL
LM 3610092
REVISION LETTER IN LWR RH CORNER APPLIES TO PICTORIAL SHT 1
LM REV LETTER CONTROLS DOCUMENT

Remington Rand Univac
DIVISION OF SPERRY RAND CORPORATION

TITLE
COMPONENT ASSEMBLY
TYPE A207A3
4FC

| SIZE | DWG NO. |
|---|---|
| D | 3610092 |

CURRENT NO.
SCALE 2/1

| CIRCUIT | INPUT TERM. | OUTPUT TERM. | TEST TERM. |
|---|---|---|---|
| | | | |

COMPONENTS

THIS DOCUMENT CONTAINS CONFIDENTIAL INFORMATION OF THE R.U. SECTOR SANCTIONS OF SPERRY RAND CORPORATION AND IS FURNISHED PURSUANT TO THE FOLLOWING AGREEMENT

BY THE UNDERSTANDING THAT THIS DOCUMENT AND THE INFORMATION IT CONTAINS WILL NOT BE DISCLOSED TO ANY PERSON NOT AN EMPLOYEE OF THAT PARTY HERETO OR ITS AFFILIATES OR SUBSIDIARIES WITHOUT THE PRIOR WRITTEN CONSENT OF THE REMINGTON RAND DIVISION OF SPERRY RAND CORPORATION.

DO NOT SCALE THIS PRINT

A B C D E

3610092

**DETACHED LIST OF MATERIAL**

TITLE OF DRAWING FROM WHICH DETACHED: COMPONENT ASSEMBLY TYPE A2U7A2

ENG. PROJ. CODE: 02 | UNIT OF MEASURE | DRG SIZE: D | MFG: UNIVAC | LM | DWG. NO. 3610092 | REV. E

MFG. PROJ. CODE | L OF CLASS: A | DCL: H | LIST OF MATERIAL IDENTIFICATION | ISSUE NO. 1

CODE IDENT NO. 90536 | PIC. REV. E | SHEET 1

MAN. 1603 LIST OF MATERIAL

| QTY. PROD. | MFG. QTY. | MFG. U/M | FIND | REFERENCE DES A | REFERENCE DES B | REFERENCE DES C | CODE IDENT | D I F C | IDENTIFICATION INFO PART OR IDENT NO. DWG. NO. | IDENTIFICATION INFO PART OR IDENT NO. DASH | NOMENCLATURE OR DESCRIPTION | D C L |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | - 1 | | | | | | | | PT NO. 3610092 00 THRU 00 | |
| 1 | | | 2 | - - - | - - - | - - - | - - | C | 3138798 | 00 | PRINTED WIRING BOARD | M |
| 1 | | | 3 | LOCEM | CASE | REF | | A | 7 4200175 | 00 | SEMICONDUCTOR DEVICE, DIODE- | M |
| | | | R | 8 | | | 02 | | | | GERMANIUM RECTIFIER, EM9 | |
| 1 | | | 4 | V | | | | C | 3010974 | 22 | RELAY, DRY REED DC | M |
| | | | | | | | | | | | 4 FORM C,COIL VOLTAGE 39 MAX | |
| | | | H01 | - - - | - - - | - - - | - - | D | 4000039 | 02 | PRINTED CKT BD STU OUTLINE | M |
| | | | | | | | | | | | 5.030 WIDE | |
| | | | S01 | - - - | - - - | - - - | - - | | DS00304 | | SOLDERING OF PRTD CKT BOARDS | M |
| | | | S02 | - - - | - - - | - - - | - - | | DS00415 | 00 | PRINTED CIRCUIT PROCESSES | M |
| | | | | | | | | | | | 0.0001 GOLD-MILITARY | |
| | | | S03 | - - - | - - - | - - - | - - | | MS02159 | | ASSY SPEC FOR MOD A PRTD, | M |
| | | | | | | | | | | | WIRING BOARDS | |
| | | | S04 | - - - | - - - | - - - | - - | | MS02402 | | FASTRAND PACKAGE TEST SPEC | M |
| | | | | | | | | | | | RELAY CARD 4 FORM C TYPE A 207 | |

FORM P 1048 V REV D 68

**DETACHED LIST OF MATERIAL**

TITLE OF DRAWING FROM WHICH DETACHED: COMPONENT ASSEMBLY TYPE A2U7A2

ENG. PROJ. CODE: 02 | UNIT OF MEASURE | DRG SIZE: D | MFG: UNIVAC | LM | DWG. NO. 3610092 | REV. E

MFG. PROJ. CODE | L/M CLASS: A | DCL: H | LIST OF MATERIAL IDENTIFICATION | ISSUE NO. 1

CODE IDENT NO. 90536 | PIC. REV. E | SHEET 2

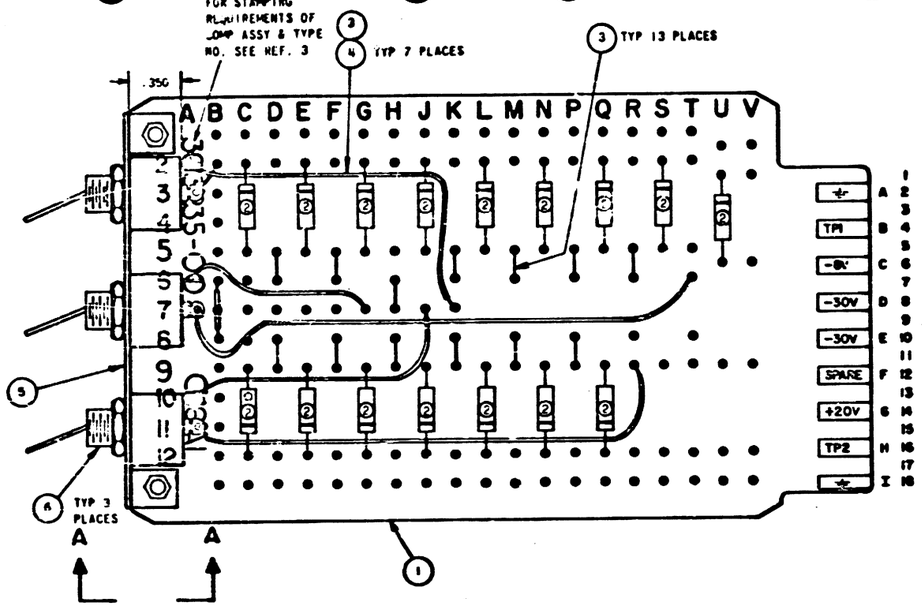
MAN. 1603 LIST OF MATERIAL

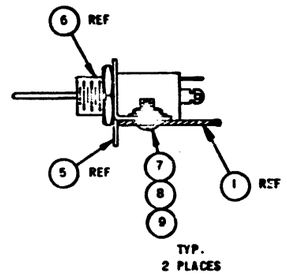
| QTY. PROD. | MFG. QTY. | MFG. U/M | FIND | REFERENCE DES A | REFERENCE DES B | REFERENCE DES C | CODE IDENT | D I F C | IDENTIFICATION INFO PART OR IDENT NO. DWG. NO. | IDENTIFICATION INFO PART OR IDENT NO. DASH | NOMENCLATURE OR DESCRIPTION | D C L |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Z01 | - - - | - - - | - - - | - - | | M 13880 | 03 | L/M D PIC U REV HISTORY | |
| | | | Z02 | - - - | - - - | - - - | - - | | M 14610 | 01 | L/M E PIC E REV HISTORY | |

W. Y. Yanis
3-5-68

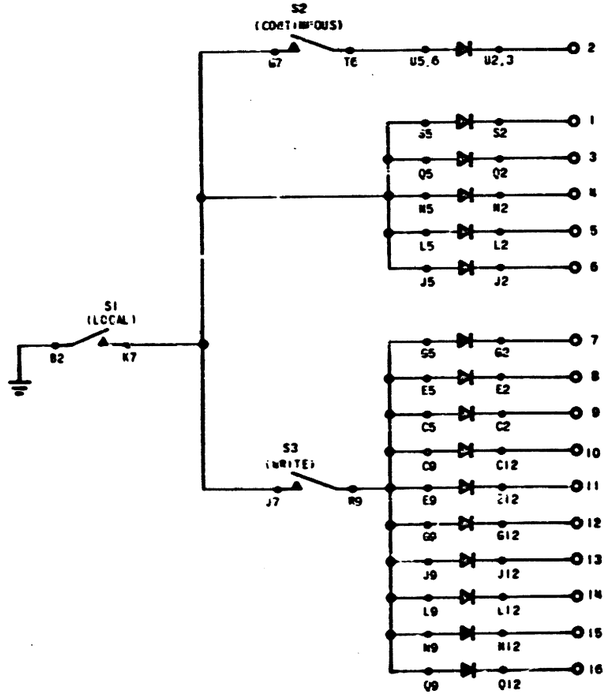
SHEET 2 OF 2

FORM P 1048 V REV D 68




SECTION A-A




BLOCK SYMBOL

USE SCHEMATIC

NOTES:

1. NO. OF CARD SPACES REQUIRED: ONE (1)
2. UNLESS OTHERWISE SPECIFIED: DIODES ARE EM120

| SYM | ZONE | E.R. | DESCRIPTION | LTR | DATE | APPROVED |
|---|---|---|---|---|---|---|
| - | | H17169-1 | FINAL RELEASE OF PT-00 | | 4-27-65 | |

| | | | | |
|---|---|---|---|---|
| 4 | TEST SPEC | S04 | | |
| 3 | ASSY SPEC | S03 | | |
| 2 | MANUFACTURING SPEC | S02 | | |
| 1 | SOLDER SPEC | S01 | | |
| | | | | |

REFERENCES

FOR MATERIAL REQUIREMENTS SEE DETACHED LIST OF MATERIAL LM 3613235

REVISION LETTER IN LWR RH CORNER APPLIES TO PICTORIAL SHT 1 LM REV LETTER CONTROLS DOCUMENT

PART NO. 3613235-00

UNLESS OTHERWISE SPECIFIED: DIMENSIONS IN INCHES TOLERANCE ON 2 PLACE DECIMALS ± .03, 3 PLACE DECIMALS ±, ANGLES ±; HOLE DIAMETER TOLERANCE 0 THRU .250 +.003 −.002, .251 THRU .500 +.005 −.003, .501 & LARGER +.010 −.006; THREADS: EXT CL 2A, INT CL 2B; MATERIAL; FINISH

NEXT ASSY 0059 EQUIPMENT

APPLICATION

COMMODITY CODE

| | | |
|---|---|---|
| LAYOUT | SMc QUADE | 4/1/65 |
| DRAFTSMAN | R Power | 4/12/65 |
| CHECKER | V A Lamagna | 4-22-65 |
| ENGINEER | | 4-27-65 |
| APPROVAL | | 4-27-65 |

CLASS A

UNIVAC DIVISION OF SPERRY RAND CORPORATION

TITLE: COMPONENT ASSEMBLY TYPE C116A1

DIODE SWITCH

SIZE D

DWG NO 3613235

SCALE 2/1

WEIGHT

SHEET 1 OF 1

DO NOT SCALE THIS PRINT

DWG NO 3613235

| INPUT TERM | OUTPUT TERM | TEST TERM | COMPONENTS |
|---|---|---|---|
| | | | |

THIS DRAWING CONTAINS CONFIDENTIAL INFORMATION OF THE UNIVAC DIVISION OF SPERRY RAND CORPORATION AND IS FURNISHED PURSUANT TO THE FOLLOWING AGREEMENT

BY THE UNDERSIGNED IT IS AGREED THAT THIS DRAWING OR ANY PART THEREOF OR INFORMATION CONTAINED THEREIN MAY NOT BE DISCLOSED, REPRODUCED, MANUFACTURED OR USED FOR THE BENEFIT OF ANYONE OTHER THAN THE UNIVAC DIVISION OF SPERRY RAND CORPORATION

**DETACHED LIST OF MATERIAL**

TITLE OF DRAWING FROM WHICH DETACHED: COMPONENT ASSY TYPE C116A1

DIODE SWITCH CARD

UNIVAC

ENG RPO CODE 19 | UNIT OF MEASURE | DWG SIZE D | MFG RPO CODE | LIFE CLASS A | SCL M

LM | DWG NO 3613235 | REV - | LIST OF MATERIAL IDENTIFICATION | ISSUE NO 1 | CODE IDENT NO | PIC REV - | SHEET 1

| QTY REQD | MFG QTY | FIND NO | REFERENCE DES A | B | C | CODE IDENT | IDENTIFICATION NO PART OR IDENT NO | DWG NO | DASH | NOMENCLATURE OR DESCRIPTION | PIC |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | - 4 | | | | | | | | PT NO. 3613235 00 THRU 00 | |
| | | R LMD | | | | 01 | | | | | |
| 1 | | 1 | - - - | - - - | - - - | - - - | C | 3161302 | 00 | PRINTED WIRING BOARD | H |
| 16 | | 2 | C2 | E2 | G2 | | C | 3010810 | 00 | SEMICONDUCTOR DEVICE | H |
| | | R | J2 | L2 | N2 | 02 | | | | DIODE GERMANIUM: EM 120 | |
| | | R | Q2 | S2 | U2,3 | 03 | | | | | |
| | | R | C9 | E9 | G9 | 04 | | | | | |
| | | R | J9 | L9 | N9 | 05 | | | | | |
| | | R | Q9 | | | 06 | | | | | |
| 20 | | 3 | - - - | - - - | - - - | - - - | R | 7 6501152 | 00 | WIRE, ELECTRICAL TINNED COPPER | H |
| | | | | | | | | | | .020 OD NO.24 GAUGE | |
| 15 | | 4 | - - - | - - - | - - - | - - - | C | 3004195 | 00 | INSULATION SLV, ELEC- VINYL | H |
| | | | | | | | | | | FOR # 22 WIRE, .012 WALL THK | |
| 1 | | 5 | - - - | - - - | - - - | - - - | C | 3161301 | 00 | BRACKET - SWITCH MOUNTING | H |
| 3 | | 6 | - - - | - - - | - - - | - - - | A | 3005074 | 00 | SWITCH, TOGGLE - SPST, 5A | H |
| | | | | | | | | | | SUBMIATURE 50VDC OR 125VAC | |
| 2 | | 7 | - - - | - - - | - - - | - - - | C | 3157139 | 02 | SCREW MACH PAN HD SLOT, CRES | H |
| | | | | | | | | | | 0.250 LG 2-56 UNC - 2A | |

**DETACHED LIST OF MATERIAL**

COMPONENT ASSY TYPE C116A1

DIODE SWITCH CARD

UNIVAC

19 | A | D | H

LM | 3613235 | - | 1 | - 2

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2 | | 8 | - - - | - - - | - - - | - - - | C | 4912550 | 09 | WASHER LOCK (SPRING) HELICAL | H |
| | | | | | | | | | | NO. 2 | |
| 2 | | 9 | - - - | - - - | - - - | - - - | C | 4912540 | 04 | NUT, PLAIN, HEXAGON-MACHINE | H |
| | | | | | | | | | | NO. 2-56 UNC THD CRES | |
| | | S01 | - - - | - - - | - - - | - - - | | DS00304 | | SOLDERING OF PRTD CKT BOARDS | H |
| | | S02 | - - - | - - - | - - - | - - - | | DS00415 | 01 | PRINTED CIRCUIT PROCESSES | H |
| | | | | | | | | | | 0.00007 GOLD-COMMERCIAL | |
| | | S03 | - - - | - - - | - - - | - - - | | HS02159 | | ASSY SPEC FOR MOD X PRTD. | H |
| | | | | | | | | | | WIRING BOARDS | |
| | | S04 | - - - | - - - | - - - | - - - | | SH02925 | 00 | UNISERVO VIII PKG. TEST SPEC. | H |
| | | | | | | | | | | DIODE SWITCH CARD C11. | |
| | | Z01 | - - - | - - - | - - - | - - - | | M 17169 | 01 | L/M - PIC - REV HISTORY | |

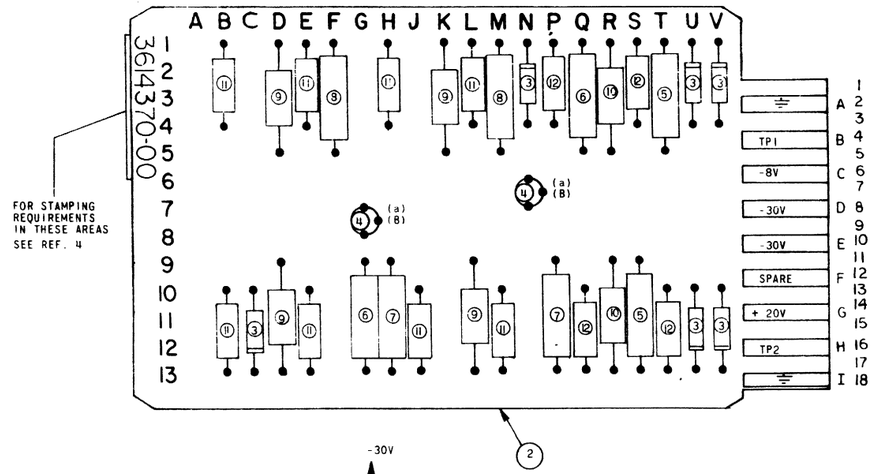
J. Lamoyne
4-31-61

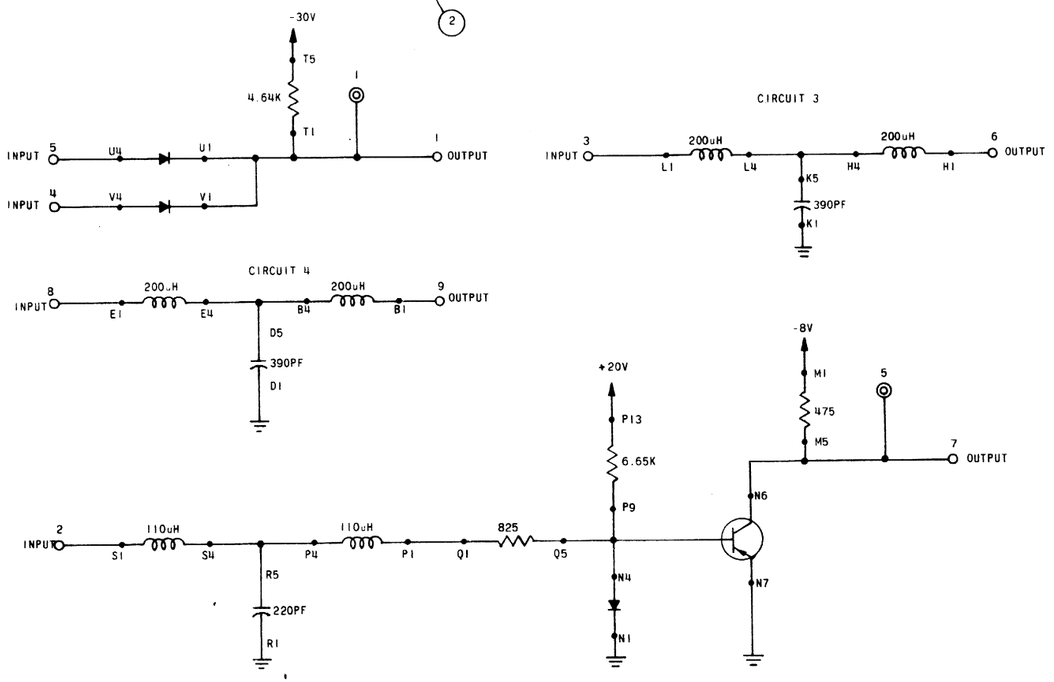
| REVISIONS | | | | | | |
|---|---|---|---|---|---|---|
| ZONE | LTR | EIR | DESCRIPTION – FOR DETAILS SEE EIR | CHK | DATE | APPROVED |
| | - | H17584 -10 | RELEASE PT-00 | | 2-3-67 | |

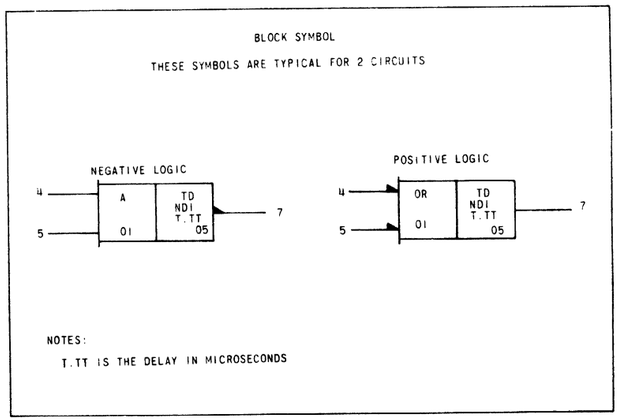
NOTES:

1.

| NO. OF CARD SPACES REQUIRED |
|---|
| ONE (1) |




SIMILAR TO 3610860-00

| | | | | CIRCUIT 1&12 | | | | CIRCUIT 3&11 | | | | CIRCUIT 4&9 | | | | CIRCUIT 5&7 | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 12.11.9.7 | 13.12.16.10 | 17.15.11.14 | 12.7 | V10.V13 | U10.U13 | S9. S13 | M13.M10 | L9. L13 | U10.J13 | B10.B13 | D13. D9 | E13.E10 | T13.T10 | R9.R13 | Q10.Q13 | G13.G9 | H13.H9 | C10.C13 | G7. G8 | F1. F5 | | | | | | |
| 1.3.4.5 | 5 4 3.8.2 | 1.6.9.7 | 1.5 | U4 U1 | V4 V1 | T5 T1 | L1 L4 | K5. K1 | H4. H1 | E1. E4 | D5. D1 | B4. B1 | S1. S4 | R5. R1 | P4. P1 | Q1. Q5 | P13.P9 | N4. N1 | N6.N7 | M1. M5 | | | | | | |
| CIRCUIT | INPUT TERM | OUTPUT TERM | TEST TERM | COMPONENTS | | | | | | | | | | | | | | | | | | | | | | | |

| | | |
|---|---|---|
| 5 | TEST SPEC. | S01 |
| 4 | ASS'Y SPEC. | S02 |
| 3 | | |
| 2 | SOLDER SPEC. | S04 |
| 1 | | |

REFERENCES

UNLESS OTHERWISE SPECIFIED

DIMENSIONS IN INCHES TOL ON
2 PLACE DECIMALS ± | 3 PLACE DECIMALS ± | ANGLES ±

HOLE DIA TOL
0 THRU .250 +.003 −.002 | .251 THRU .500 +.005 −.003 | .501 & LARGER +.010 −.005

THREADS: EXT CL 2A, INT CL 2B

COMMODITY CODE

| | | |
|---|---|---|
| LAYOUT | J MORRIS | 1/31/67 |
| DRAFTSMAN | J. Lafalet | 2/2/67 |
| CHECKER | | 2-3-67 |
| ENGINEER | H C Stile | 2-13-67 |
| APPROVAL | | 2-13-67 |
| MFG ENGINEER | | 2/14/67 |

FOR MATERIAL REQUIREMENTS SEE DETACHED LIST OF MATERIAL
LM 3614370
REVISION LETTER IN LWR RH CORNER APPLIES TO PICTORIAL SHT '5'
LM REV LETTER CONTROLS DOCUMENT

FOR MATL REQUIREMENTS SEE L/M, L/M REV LETTER CONTROLS DOCUMENT.

CLASS A

UNIVAC
DIVISION OF SPERRY RAND CORPORATION

TITLE
COMPONENT ASSEMBLY
DELAYED INVERTING AMPLIFIER

SIZE D | CODE IDENT NO. | DWG NO. 3614370

SCALE 2/1 | WEIGHT | SHEET 1 OF 1

DO NOT SCALE THIS PRINT

PT. NO. 3614370-00


COMPANY CONFIDENTIAL INFORMATION

THIS DOCUMENT CONTAINS CONFIDENTIAL INFORMATION OF THE SPERRY RAND CORPORATION. IN CONSIDERATION OF THE RECEIPT OF THIS DOCUMENT, THE RECIPIENT AGREES NOT TO REPRODUCE, COPY, USE OR TRANSMIT THIS DOCUMENT AND/OR THE INFORMATION THEREIN CONTAINED, IN WHOLE OR IN PART, OR TO SUFFER SUCH ACTION BY OTHERS, FOR ANY PURPOSE, EXCEPT WITH THE WRITTEN PERMISSION, FIRST OBTAINED, OF SPERRY RAND CORPORATION, AND FURTHER AGREES TO SURRENDER SAME TO SPERRY RAND CORPORATION UPON DEMAND.


DWG NO. 3614370

DETACHED LIST OF MATERIAL

COMPONENT ASSEMBLY (DELAYED INVERTING AMPLIFIER)

UNIVAC

FE#. 3+67

LM 3614370

| QTY REQ | REFERENCE DES | | | CODE (SEE) | | CONFIGURATION NO PART OR STANDARD DWG NO | DASH | NOMENCLATURE OR DESCRIPTION | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | PT NO. 3614370 00 THRU 00 | |
| 1 | 2 | | | | C | 3138759 | 00 | PRINTED WIRING BOARD | C |
| 6 | 3 N1 | U1 | V1 | | C | 3010810 | 00 | SEMICONDUCTOR DEVICE | M |
| | R C10 | U10 | V10 | 02 | | | | DIODE GERMANIUM: EM 120 | |
| 2 | 4 N6 | G7 | | | C | 4006000 | 01 | TRANSISTOR PNP GERMANIUM | M |
| | | | | | | | | HAS LEAD SPREADER | |
| 2 | 5 T1 | S9 | | | C | 2012106 | 56 | RESISTOR FIXED FILM | M |
| | | | | | | | | 1/2 WATT +- 1% 4640 OHMS | |
| 2 | 6 G1 | G9 | | | C | 2012105 | 84 | RESISTOR: FIXED FILM | M |
| | | | | | | | | 825 OHMS 1/2 WATT +- 1% | |
| 2 | 7 P9 | P9 | | | C | 2012106 | 71 | RESISTOR FIXED FILM | M |
| | | | | | | | | 1/2 WATT +- 1% 6650 OHMS | |
| 4 | 8 F1 | P1 | | | C | 2012105 | 61 | RESISTOR: FIXED FILM | M |
| | | | | | | | | 475 OHMS 1/2 WATT +- 1% | |
| 4 | 9 D1 | K1 | D9 | | A | 2012058 | 07 | CAPACITOR FXD FILM OR CER DIEL | M |
| | R L9 | | | 02 | | | | 390 PF +-5% 100 VDC | |

DETACHED LIST OF MATERIAL

COMPONENT ASSEMBLY (DELAYED INVERTING AMPLIFIER)

UNIVAC

FE#. 3+67

LM 3614370

| QTY REQ | REFERENCE DES | | | CODE (SEE) | | CONFIGURATION NO PART OR STANDARD DWG NO | DASH | NOMENCLATURE OR DESCRIPTION | |
|---|---|---|---|---|---|---|---|---|---|
| 2 | 10 C1 | R9 | | | A | 3004753 | 31 | CAPACITOR: FXD: PORC OR G DIEL | M |
| | | | | | | | | 220 PICOFARAD +-5% 100 VDC | |
| 8 | 11 B1 | E1 | H1 | | C | 3006148 | 31 | COIL: RF - +- 5% | M * |
| | R L1 | E10 | E10 | 02 | | | | 200 UH | |
| | R J10 | H10 | | 03 | | | | | |
| 4 | 12 P1 | S1 | G10 | | C | 3006148 | 25 | COIL: RF - +- 5% | M * |
| | R T10 | | | 02 | | | | 110 UH | |
| | A01 | | | | D | 4000035 | 02 | PRINTED CKT BD STD OUTLINE | M |
| | | | | | | | | 5.000 WIDE | |
| | S01 | | | | | MS02299 | | MOD X PACKAGE TEST SPE. A31A6 | C |
| | | | | | | | | DELAYED INVERTING AMPLIFIER | |
| | S02 | | | | | MS02159 | | ASSY SPEC FOR MOD X PRTD. | M |
| | | | | | | | | WIRING BOARDS | |
| | S03 | | | | | DS00415 | 02 | PRINTED CIRCUIT PROCESSES | M |
| | | | | | | | | 0.0004-0.0009 SOLDER-COAL | |
| | S04 | | | | | DS00304 | | SOLDERING OF PRTD CKT BOARDS | M |

DETACHED LIST OF MATERIAL

COMPONENT ASSEMBLY (DELAYED INVERTING AMPLIFIER)

UNIVAC

FE#. 3+67

LM 3614370

| QTY REQ | REFERENCE DES | | | CODE (SEE) | | CONFIGURATION NO PART OR STANDARD DWG NO | DASH | NOMENCLATURE OR DESCRIPTION | |
|---|---|---|---|---|---|---|---|---|---|
| | Z31 | | | | | H 17596 | 10 | L/M - PIC - REV HISTORY | |

SHEET 3 OF 3

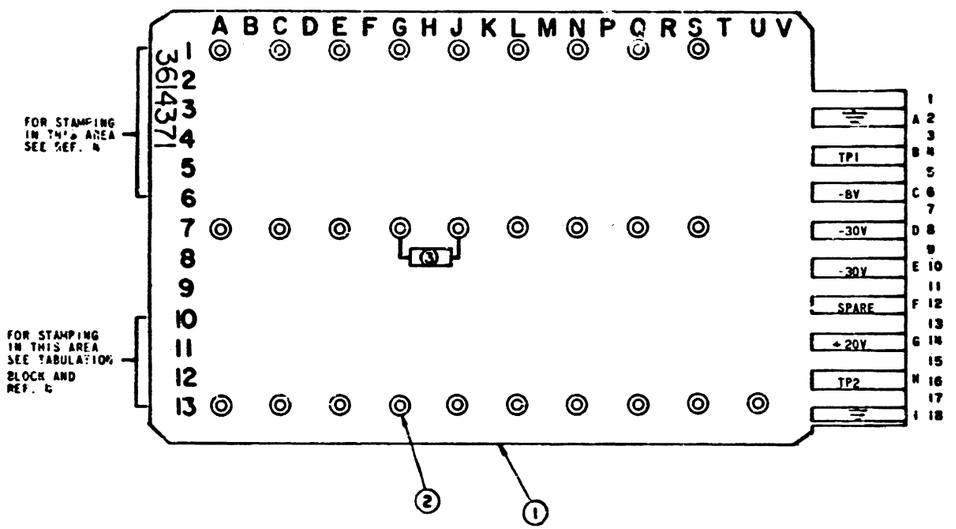
| PART NUMBER | STAMPING VARIATION |
|---|---|
| 3614371-00 | VE09 |
| 3614371-01 | VE10 |
| 3614371-02 | VE11 |

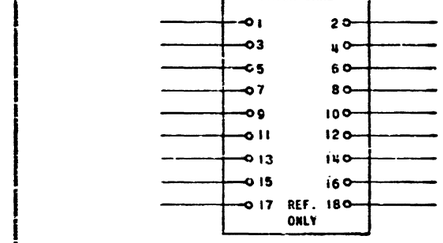
| REVISIONS | | | | | | |
|---|---|---|---|---|---|---|
| ZONE | LTR | EIR | DESCRIPTION — FOR DETAILS SEE EIR | CHK | DATE | APPROVED |
| | - | 47459 | RELEASE PT-00, 01 & 02 | [illegible] | 3 67 | [illegible] |

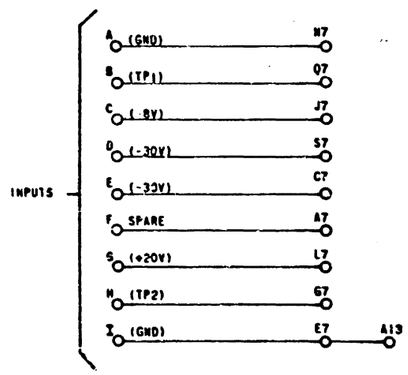
## NOTES:

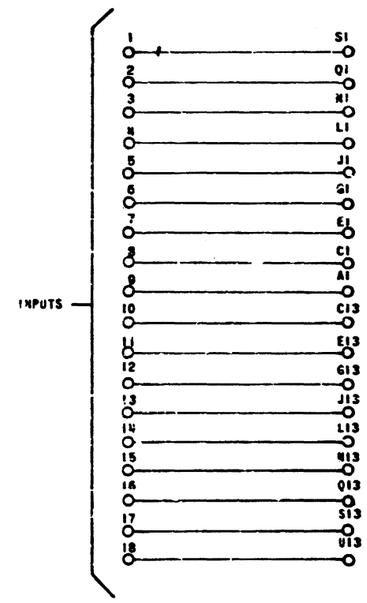
1. | NO. OF CARD SPACES REQUIRED |
   |---|
   | ONE (1") |

2. REFERENCE TO D3613004 00,554 PATCH CARD, OR (503) TO BE UNDERSTOOD TO INCLUDE THIS CARD.




SIMILAR TO 3610004-00

PT. NO. SEE TAB

| | | |
|---|---|---|
| 5 | TEST SPEC. SEE NOTE 2 | S03 |
| 4 | ASSY SPEC. | S02 |
| 3 | | |
| 2 | SOLDER SPEC. | S01 |
| 1 | | |
| | REFERENCES | |

FOR MATERIAL REQUIREMENTS SEE DETACHED LIST OF MATERIAL LM 3614371

REVISION LETTER IN LWR RH CORNER APPLIES TO PICTORIAL SKT IS LM REV LETTER CONTROLS DOCUMENT

FOR MATL REQUIREMENTS SEE L/M, L/M REV LETTER CONTROLS DOCUMENT.

UNLESS OTHERWISE SPECIFIED
DIMENSIONS IN INCHES TOL ON
2 PLACE DECIMALS ± | 3 PLACE DECIMALS ± | ANGLES ±
0 THRU .250 ± .03 | HOLE DIA TOL .251 THRU .500 ± .005 | .501 & LARGER ± .01

LAYOUT J. Morris 2-9-67
DRAFTSMAN J. Seefeldt 2-9-67
[illegible] 4-9-67
[illegible] 4-14-67
[illegible] 4-14-67
ENG ENGINEER [illegible] 4/11/67

CLASS A

UNIVAC

TITLE
COMPONENT ASSEMBLY
PATCH CONNECTOR

SIZE D | CODE IDENT NO. | DWG NO. 3614371

DO NOT SCALE THIS PRINT

UNIVAC

**PARTS LIST**

| CODE IDENT | ISSUE DATE | CONTROL | CA | TYPE | COMM CODE | SE | DWG NO | SHEET | PL REV |
|---|---|---|---|---|---|---|---|---|---|
| 92120 | 05/10/69 | C 25 | | P | | A | PL 3614371 | 1 | A |

TITLE OF DRAWING FROM WHICH DETACHED: COMPONENT ASSY - PATCH COMN PART VARIES UNDER EACH HEADER

| CL | U/M | DWG SIZE | RANGE FROM | RANGE THRU | ISSUE | PL REV |
|---|---|---|---|---|---|---|
| A | EA | D | 00 | 02 | 1 | - |

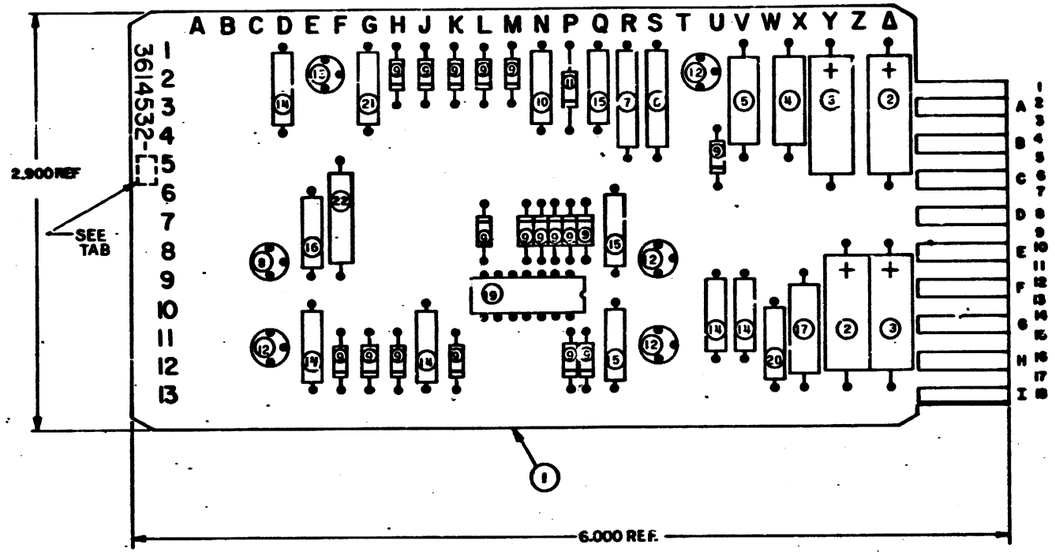
| FIND NO | QUANTITY REQUIRED | U/M | S/A | PART OR IDENT NO DRAWING NO | DASH | NOMENCLATURE OR DESCRIPTION | S/P | T/C |
|---|---|---|---|---|---|---|---|---|
| 1 | 1 | EA | C | 3138704 | -00 | PRINTED WIRING BOARD | | |
| 2 | 26 | EA | A | 3000127 | -01 | TERMINAL,STUD,BRASS, PLATED ELECTRO-SOLDER FINISH | | |
| 3 | 1 | EA | C | 3162267 | -62 | RESISTOR,FIXED,COMPOSITION- 1000 OHMS 1/2 WATT +-5% | | |
| SU1 | | XX | | DS00304 | | SOLDERING OF PRTD CKT BOARDS | | |
| SU2 | | XY | | HS02159 | | ASSY SPEC FOR MOD X PRTD. WIRING BOARDS | | |
| SU3 | | XX | | HS02289 | | MOD X PACKAGE TEST SPEC A54A1 PATCH CARD | | |
| Z01 | | | | H 18391 | 01 | EIR HISTORY; EIR REV , PL REV -, PIC REV - | | |
| Z02 | | | | S 11690 | 02 | EIR HISTORY; EIR REV , PL REV A, PIC REV - | | |
| | | | | | | (V09E) 3614371-00 VARIABLE DATA | | |
| | | | | | | (V10E) 3614371-01 VARIABLE DATA | | |
| | | | | | | (V11E) 3614371-02 VARIABLE DATA | | |

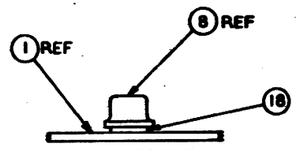
UDI 1317



SPERRY RAND

| PART NO | FIND | REMARKS |
|---|---|---|
| 3614532-00 | (17) (4) (1) (9) | SUPERSEDED |
| 3614532-01 | (17) (4) (1) (9) | SUPERSEDED |
| 3614532-02 | (17) (4) (1) (9) | SUPERSEDED |
| 3614532-03 | (17) (4) (1) (9) | |




TYPICAL TRANSISTOR MOUNTING FOR RT213 (SCALE NONE)

## NOTES:

1. STRIPE ON DIODE BODY DENOTES CATHODE END.
   ○ INDICATES FIND NO.
   <> INDICATES DESIGNATIONS STAMPED ON COMPONENT FOR REF. ONLY.
   ( ) INDICATES DESIGNATIONS FOR REF. ONLY & SHALL NOT BE STAMPED.
2. UNLESS OTHERWISE DESIGNATED
   - CONTACT A SHALL BE ⏚
   - CONTACT B SHALL BE SPARE
   - CONTACT C SHALL BE —●— -8V
   - CONTACT D & E SHALL BE —●— -30V
   - CONTACT F SHALL BE —●— -20V
   - CONTACT G SHALL BE —●— +20V
   - CONTACT H SHALL BE SPARE
   - CONTACT I SHALL BE ⏚
3. MINIMUM SPACE FOR THIS BOARD IS .500 INCH
4. ASSEMBLE PER (S01)
5. TEST PER (S02) & (S03)
6. SOLDER PER (S04)
7. 
8. UNLESS OTHERWISE SPECIFIED:
   RESISTOR VALUES ARE IN OHMS, 1/2W, 2%;
   DIODES ARE EM170; TRANSISTORS ARE RT176.

| REVISIONS | | | | | | |
|---|---|---|---|---|---|---|
| ZONE | LTR | EIR | DESCRIPTION — FOR DETAILS SEE EIR | CHK | DATE | APPROVED |
| | — | H19601-1 | RELEASED | [illegible] | 2-7-68 | [illegible] |
| | A | C10891-1 | SEE EIR REL.-01 | [illegible] | 4/16/68 | [illegible] |
| | B | C10917-1 | SEE EIR REL.-02 | [illegible] | 6/17/68 | [illegible] |
| | C | C11322-1 | SEE EIR REL.-03 | [illegible] | 11/6/68 | [illegible] |

COMPANY CONFIDENTIAL INFORMATION
THIS DOCUMENT CONTAINS CONFIDENTIAL INFORMATION OF THE SPERRY RAND CORPORATION IN CONSIDERATION OF THE DISCLOSURE OF THIS DOCUMENT, THE RECIPIENT AGREES NOT TO DISCLOSE THE CONTENTS OF THIS DOCUMENT, THIS DOCUMENT AND THE INFORMATION THEREIN CONTAINED IN WHOLE OR IN PART, OR TO SUCH PERSONS AS ARE NOT EMPLOYEES OF SPERRY RAND CORP. WITH THE WRITTEN PERMISSION FIRST OBTAINED OF SPERRY RAND CORPORATION AND PUTTING SEALS TO SURRENDER SAME TO SPERRY RAND CORPORATION UPON DEMAND.

| SHEET | 1 | 2 |
|---|---|---|
| REV. | C | C |
| CARD DESIGN LEVEL | | |

# MULTISTATUS DWG

SEE L/M FOR PART NUMBER STATUS

PART NO. SEE TAB

SERIES

*OR MATL REQUIREMENTS SEE L/M, L/M REV LETTER CONTROLS DOCUMENT.

UNLESS OTHERWISE SPECIFIED
DIMENSIONS IN INCHES TOL ON
2 PLACE DECIMALS ± ; 3 PLACE DECIMALS ± ; ANGLES ±
HOLE DIA TOL
0 THRU .250 + .003 − .002
.251 THRU .500 ± .005 − .003
.501 & LARGER + .010 − .005
TOLERANCE: EXT CL 2A, INT CL 2B
COMMODITY CODE

| | | |
|---|---|---|
| LAYOUT | J. PRYPUTNIEWICZ | 1-24-68 |
| DRAFTSMAN | J. Pryputniewicz | 1/29/68 |
| CHECKER | [illegible] | [illegible] |
| [illegible] | [illegible] | 2/1/68 |
| [illegible] | [illegible] | [illegible] |
| MFG ENGINEER | [illegible] | |

CLASS A (V1)

UNIVAC
DIVISION OF SPERRY RAND CORPORATION

TITLE
COMPONENT ASSEMBLY
PROBE PROPAGATION

| SIZE | CODE IDENT NO. | DWG NO. |
|---|---|---|
| D | | 3614532 |

SCALE 2/1 WEIGHT SHEET 1 OF 2

DO NOT SCALE THIS PRINT

3614532 C

| REVISIONS (CONTROLLING LEVEL APPEARS ON FIRST SHEET) | | | | | | |
|---|---|---|---|---|---|---|
| ZONE | LTR | EIR | DESCRIPTION – FOR DETAILS SEE EIR | CHG | DATE | APPROVED |
| | – | M19601-1 | RELEASED | | 2-7-68 | |
| | B | C10917 -1 | SEE EIR | | 10/7/68 | |
| | C | C11282 -1 | SEE EIR | | 1/1/69 | |

LOGIC SYMBOL

T4 LSN BDA OR 01 L09 A AG A AG2 OR 01 L09 OR 01 L09 A AG OR AG2 OR 01 L09 OR 01 L09 NLRA1 LS3 LS3 100 Ω 50 Ω

PT-03 ONLY

02 15 13 10

+6V W,X5 PT. 00 & 01 25.5K PT. 02 & 03 5.49K 1/2W 1% W,X1 Q4 3.9K Q1 T,U1,2 T,U2,3 U6 U4 V1 95.3 1/2W 1% V5 S1 392 1/2W 1% S5 R5 57.6 1/2W 1% R1 N 01 L9

+28V N4 7.5K N1 TT5 EM120 P4 P1 M3 L3 K3 J3 G1 9.1K G4 H1 H3 -8V D4 1K D1 E,F1,2 E,F2,3 +6V F5 33 2W 2% F9 +8V J13 1F J10 TT11 K11 K13 H13 G13 F13 H11 G11 F11 E13 1K E10 E6 270 E6 C,D8 RT213 C,D11 C,D12 C,D8 TT9 14

N8,7 N8,9 N,N8,7 N,N8,9 P8,7 P8,9 N,P8,7 N,P8,9 P,Q8,7 P,Q8,9 PT-03 ONLY

+6V Q,R6 3.9K Q,R9 U12 U9 1K S9 TT1 S8 15

+6V Q,R13 3.9K QR10 V9 V12 1K TT12 S12 S11 P,Q13 P,Q11 P13 P11 W13 360 W10 X13 100 Ω 1/2W 1% X8 +6V (SWITCHED) 13 14 A 01 L9 1 13 L8,7 L8,8 7 6 A 01 L9 8 TT3 TT7

OR 01 L9 3 2 12

+28V Y1 10uF 25V +100% -10% Y6 L9 10

+6V (SWITCHED) 10 Δ8 20uF 15V +100% -10% Δ13 +6V 8 9 Y,Z8 28uF 15V +100% -10% Y,Z13 L9 4

-8V Δ6 28uF 15V +100% -10% Δ1

INFORMATION ON THIS SHEET FOR PT 00,01,02 &03

DWG NO. 3614532

| CLASS | UNIVAC DIVISION OF SPERRY RAND CORPORATION | |
|---|---|---|
| SIZE D | CODE IDENT NO. | DWG NO. 3614532 |
| SCALE NONE | WEIGHT | SHEET 2 |

DO NOT SCALE THIS PRINT

UNIVAC

PARTS LIST | CODE IDENT 92120 | ISSUE DATE 02/13/69 | CONTROL C 25 | CL P | TYPE P | COMM CODE | ST M | PL | DWG NO 3614532 | SHEET 1 | PL REV C

TITLE OF DRAWING FROM WHICH DETACHED: COMPONENT ASSEMBLY — PROBE PROPAGATION | CL A | U/M EA | 2 | DWG SIZE D | RANGE 00 THRU 03 | ISSUE 2 | PIC REV C

| FIND NO | QUANTITY REQUIRED | U/M | S | PART OR IDENT NO DRAWING NO | DASH | NOMENCLATURE OR DESCRIPTION | S P | C R G |
|---|---|---|---|---|---|---|---|---|
| 1 | N | | | | | SEE VARIABLE DATA BELOW | | |
| 2 | 2 | EA | C | 2012127 | -09 | CAPACITOR FXD ELECT. AL 15V DC 20 UF -10% +100% | | |
| | | | | REF DES | 1 | Y-Z8 (DELTA 1) | | |
| 3 | 2 | EA | C | 2012128 | -07 | CAPACITOR FXD ELECT AL 25V DC 10 UF -10% +100% | | |
| | | | | REF DES | 1 | Y1 (DELTA 8) | | |
| 4 | N | | | | | SEE VARIABLE DATA BELOW | | |
| 5 | 1 | EA | C | 2012104 | -94 | RESISTOR, FIXED FILM 95.3 OHMS 1/2 WATT +- 1% | | |
| | | | | REF DES | 1 | V1 | | |
| 6 | 1 | EA | C | 2012105 | -53 | RESISTOR, FIXED FILM 392 OHMS 1/2 WATT +- 1% | | |
| | | | | REF DES | 1 | S1 | | |
| 7 | 1 | EA | C | 2012104 | -73 | RESISTOR, FIXED FILM 57.6 OHMS 1/2 WATT +- 1% | | |
| | | | | REF DES | 1 | R1 | | |
| 8 | 1 | EA | C | 3006707 | -00 | TRANSISTOR,SILICON,NPN,RT213 CASE HEIGHT .167 MAX. | | |
| | | | | REF DES | 1 | C-D8 | | |
| 9 | N | | | | | SEE VARIABLE DATA BELOW | | |
| 10 | 1 | EA | C | 3010863 | -69 | RESISTOR FXD FILM - 7500 OHMS 1/2WATT +- 2% | | |
| | | | | REF DES | 1 | N1 | | |
| 11 | 1 | EA | C | 3010810 | -00 | SEMICONDUCTOR DEVICE DIODE GERMANIUM: EM 120 | | |
| | | | | REF DES | 1 | P1 | | |
| 12 | 4 | EA | C | 3004800 | -02 | TRANSISTOR - SILICON, NPN, RT - 176 WITH LEAD SPREADER | | |

UNIVAC

PARTS LIST | CODE IDENT 92120 | ISSUE DATE 02/13/69 | CONTROL C 25 | CL P | TYPE P | COMM CODE | ST M | PL | DWG NO 3614532 | SHEET 2 | PL REV C

TITLE OF DRAWING FROM WHICH DETACHED: COMPONENT ASSEMBLY — PROBE PROPAGATION | CL A | U/M EA | 2 | DWG SIZE D | RANGE 00 THRU 03 | ISSUE 2 | PIC REV C

| FIND NO | QUANTITY REQUIRED | U/M | S | PART OR IDENT NO DRAWING NO | DASH | NOMENCLATURE OR DESCRIPTION | S P | C R G |
|---|---|---|---|---|---|---|---|---|
| | | | | REF DES | 1 | C-D11 S8 S11 T-U1-2 | | |
| 13 | 1 | EA | C | 4908000 | -01 | TRANSISTOR PNP GERMANIUM HAS LEAD SPREADER | | |
| | | | | REF DES | 1 | C-F1-2 | | |
| 14 | 5 | EA | C | 3010883 | -48 | RESISTOR FXD FILM - 1000 OHMS 1/2WATT +- 2% | | |
| | | | | REF DES | 1 | D1 E10 J10 U9 V9 | | |
| 15 | 3 | EA | C | 3010883 | -62 | RESISTOR FXD FILM - 3900 OHMS 1/2WATT +- 2% | | |
| | | | | REF DES | 1 | Q-R6 Q-R10 Q1 | | |
| 16 | 1 | EA | C | 3010883 | -34 | RESISTOR FXD FILM - 270 OHMS 1/2WATT +- 2% | | |
| | | | | REF DES | 1 | E6 | | |
| 17 | N | | | | | SEE VARIABLE DATA BELOW | | |
| 18 | 1 | EA | C | 4912263 | -00 | ADAPTER, TRANSISTOR HOLDER | | |
| 19 | 1 | EA | C | 3005664 | -00 | INT CKT - QUAD TWO INPUT 'NOR'.073 +-.010 LEAD LENGTH | | |
| | | | | REF DES | 1 | L-09 | | |
| 20 | 1 | EA | C | 3010883 | -37 | RESISTOR FXD FILM - 360 OHMS 1/2WATT +- 2% | | |
| | | | | REF DES | 1 | W10 | | |
| 21 | 1 | EA | C | 3010883 | -71 | RESISTOR FXD FILM - 9100 OHMS 1/2WATT +- 2% | | |
| | | | | REF DES | 1 | Q1 | | |
| 22 | 1 | EA | A | 3006844 | -00 | RESISTOR, FIXED, WIREWOUND- 2W33 OHMS | | |
| | | | | REF DES | 1 | F8 | | |
| S01 | | XX | | DS00410 | | PRINTED CKT SPEC FOR ASSY OF | | |

UNIVAC

PARTS LIST | CODE IDENT 92120 | ISSUE DATE 02/13/69 | CONTROL C 25 | CL P | TYPE P | COMM CODE | ST M | PL | DWG NO 3614532 | SHEET 3 | PL REV C

TITLE OF DRAWING FROM WHICH DETACHED: COMPONENT ASSEMBLY — PROBE PROPAGATION | CL A | U/M EA | 2 | DWG SIZE D | RANGE 00 THRU 03 | ISSUE 2 | PIC REV C

| FIND NO | QUANTITY REQUIRED | U/M | S | PART OR IDENT NO DRAWING NO | DASH | NOMENCLATURE OR DESCRIPTION | S P | C R G |
|---|---|---|---|---|---|---|---|---|
| S02 | | X | A | CS01985 | -00 | GENERAL 1004 TEST SPEC | | |
| S03 | | X | A | SH04027 | -00 | PROBE PROPAGATION PACKAGE | | |
| S04 | | XX | | DS00304 | | SOLDERING OF PRTD CKT BOARDS | | |
| Z01 | | | | H 19601 | 04 | ECR HISTORY: ECR REV - PL REV -, PIC REV - | | |
| Z02 | | | | C 10891 | 01 | ECR HISTORY: ECR REV - PL REV A, PIC REV A | | |
| Z03 | | | | C 10917 | 01 | ECR HISTORY: ECR REV - PL REV B, PIC REV B | | |
| Z04 | | | | C 11222 | 01 | ECR HISTORY: ECR REV - PL REV C, PIC REV C | | |
| | | | | | | SUPERSEDED 3614532-00 VARIABLE DATA | | |
| R50 | | | | | | ABOVE PT NO SUPERSEDED BY 3614532-01 / / | | |
| 1 | 1 | EA | C | 3163086 | -00 | PRINTED WIRING BOARD PROBE PROPAGATION SUPERSEDED | | |
| 4 | 1 | EA | C | 2012107 | -27 | RESISTOR FIXED FILM 1/2 WATT +- 1% 25500 OHMS | | |
| | | | | REF DES | 1 | W X1 | | |
| 9 | 17 | EA | C | 3005687 | -00 | SEMICONDUCTOR DEVICE, DIODE- SILICON, EM179 | | |
| | | | | REF DES | 1 | F11 G11 H1 H11 J11 K1 K11 L1 L6-7 | | |
| | | | | | 4 | M1 M-N6-7 N6-7 N-P6-7 P6-7 P11 U4 P-011 | | |
| 17 | 1 | EA | C | 2012105 | -96 | RESISTOR, FIXED FILM 1100 OHMS 1/2 WATT +- 1% | | |
| | | | | REF DES | 1 | X9 | | |
| | | | | | | SUPERSEDED 3614532-01 VARIABLE DATA | | |
| R50 | | | | | | ABOVE PT NO SUPERSEDED BY 3614532-02 / / | | |
| 1 | 1 | EA | C | 3163086 | -00 | PRINTED WIRING BOARD PROBE PROPAGATION SUPERSEDED | | |

UNIVAC

PARTS LIST | CODE IDENT 92120 | ISSUE DATE 02/13/69 | CONTROL C 25 | CL P | TYPE P | COMM CODE | ST M | PL | DWG NO 3614532 | SHEET 4 | PL REV C

TITLE OF DRAWING FROM WHICH DETACHED: COMPONENT ASSEMBLY — PROBE PROPAGATION | CL A | U/M EA | 2 | DWG SIZE D | RANGE C0 THRU 03 | ISSUE 2 | PIC REV C

| FIND NO | QUANTITY REQUIRED | U/M | S | PART OR IDENT NO DRAWING NO | DASH | NOMENCLATURE OR DESCRIPTION | S P | C R G |
|---|---|---|---|---|---|---|---|---|
| 4 | 1 | EA | C | 2012107 | -27 | RESISTOR FIXED FILM 1/2 WATT +- 1% 25500 OHMS | | |
| | | | | REF DES | 1 | W-X1 | | |
| 9 | 17 | EA | C | 3005687 | -00 | SEMICONDUCTOR DEVICE, DIODE- SILICON, EM179 | | |
| | | | | REF DES | 1 | F11 G11 H1 H11 J11 K1 K11 L1 L6-7 | | |
| | | | | | 4 | M1 M-N6-7 N6-7 N-P6-7 P6-7 P11 U4 P-011 | | |
| 17 | 1 | EA | C | 2012104 | -96 | RESISTOR, FIXED FILM 100 OHMS 1/2 WATT +- 1% | | |
| | | | | REF DES | 1 | X9 | | |
| | | | | | | PROBE PROPAGATION 3614532-02 VARIABLE DATA | | |
| R50 | | | | | | ABOVE PT NO SUPERSEDED BY 3614532-03 02/04/9 | | |
| 1 | 1 | EA | C | 3163086 | -00 | PRINTED WIRING BOARD PROBE PROPAGATION SUPERSEDED | | |
| 4 | 1 | EA | C | 2012106 | -63 | RESISTOR FIXED FILM 1/2 WATT +- 1% 5490 OHMS | | |
| | | | | REF DES | 1 | W-X 1 | | |
| 9 | 17 | EA | C | 3005687 | -00 | SEMICONDUCTOR DEVICE, DIODE- SILICON, EM179 | | |
| | | | | REF DES | 1 | F11 G11 H1 H11 J11 K1 K11 L1 L6-7 | | |
| | | | | | 4 | M1 M-N6-7 N6-7 N-P6-7 P6-7 P11 U4 P-011 | | |
| 17 | 1 | EA | C | 2012104 | -96 | RESISTOR, FIXED FILM 100 OHMS 1/2 WATT +- 1% | | |
| | | | | REF DES | 1 | X9 | | |
| | | | | | | 3614532-03 VARIABLE DATA | | |
| 1 | 1 | EA | C | 5030274 | -00 | PRINTED WIRING BOARD PROBE PROPAGATION | | |
| 4 | 1 | EA | C | 2012106 | -63 | RESISTOR FIXED FILM 1/2 WATT +- 1% 5490 OHMS | | |

UNIVAC

| PARTS LIST | CODE IDENT | ISSUE DATE | CONTROL | CA | TYPE | COMM CODE | ST | PL | DWG NO | SHEET | PL REV |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 92120 | 02/13/69 | C 25 | | P | | M | PL | 3614532 | 5 | C |

| TITLE OF DRAWING FROM WHICH DETACHED | | CL | U/M | | DWG SIZE | RANGE | | ISSUE | PIC REV |
|---|---|---|---|---|---|---|---|---|---|
| COMPONENT ASSEMBLY | PROBE PROPAGATION | A | EA | 2 | D | 00 | THRU 03 | 2 | C |

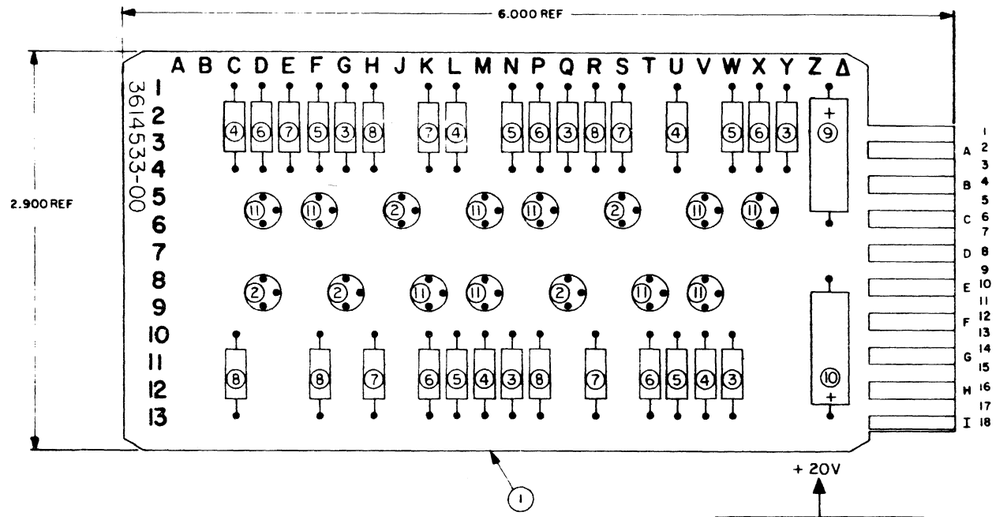
| FIND NO. | QUANTITY REQUIRED | U/M | SIZE | PART OR IDENT NO. DRAWING NO. | DASH | NOMENCLATURE OR DESCRIPTION | SP | CHG |
|---|---|---|---|---|---|---|---|---|
| | | | | REF DES | 1 | W-X1 | | |
| 9 | 18 | EA | C | 3005687 | -00 | SEMICONDUCTOR DEVICE, DIODE- SILICON, EM179 | | |
| | | | | REF DES | 1 | F11 G11 H1 H11 J1 K1 K11 L1 L6-7 | | * |
| | | | | | 4 | M1 M-N6-7 N6-7 N-P6-7 P6-7 F11 U4 P-Q1 P-Q6-7 | | * |
| 17 | 1 | EA | C | 2012104 | -96 | RESISTOR, FIXED FILM 100 OHMS 1/2 WATT +- 1% | | |
| | | | | REF DES | 1 | X9 | | |

UDH 1817



SPERRY RAND

| REVISIONS | | | | | |
|---|---|---|---|---|---|
| SYM | ZONE | EIR | DESCRIPTION | DIR | DATE | APPROVED |
| – | | H 19601-4 | RELEASED | | 5-27-68 | |




NOTES:

1) STRIPE ON DIODE BODY DENOTES CATHODE END.
   ◯ INDICATES FIND NO.
   <> INDICATES DESIGNATIONS STAMPED ON COMPONENT FOR REF ONLY.
   ( ) INDICATES DESIGNATIONS FOR REF. ONLY & SHALL NOT BE STAMPED.
2) UNLESS OTHERWISE DESIGNATED

| | | | |
|---|---|---|---|
| CONTACT | A | SHALL BE | ⏚ |
| CONTACT | B | SHALL BE | SPARE |
| CONTACT | C | SHALL BE → | -8V |
| CONTACTS | D & E | SHALL BE → | -30V |
| CONTACT | F | SHALL BE → | -20V |
| CONTACT | G | SHALL BE → | +20V |
| CONTACT | H | SHALL BE → | SPARE |
| CONTACT | I | SHALL BE | ⏚ |

3. MINIMUM SPACE FOR THIS BOARD IS .500 INCH.
4. ASSEMBLE PER (S01).
5. TEST PER (S02) AND (S03).
6. SOLDER PER (S04).
7. UNLESS OTHERWISE SPECIFIED:
   RESISTORS VALUES ARE IN OHMS, 1/2W 2%

LOGIC SYMBOL

TYPICAL 5 CIRCUITS

| CIRCUITS | INPUT TERMS | OUTPUT TERMS | TEST TERMS | COMPONENTS | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5 | 16 | 17 | | N10,N13 | M9,M8 | M10,M13 | K9,K8 | L10,L13 | K10,K13 | H10,H13 | G8,G9 | F10,F13 |
| 4 | 10 | 12 | | W10,W13 | V9,V8 | V10,V13 | T9,T8 | U10,U13 | T10,T13 | R10,R13 | Q8,Q9 | P10,P13 |
| 3 | 6 | 5 | | Y4,Y1 | X6,X5 | U4,U1 | V6,V5 | W4,W1 | X1,X4 | S4,S1 | S5,S6 | R4,R1 |
| 2 | 4 | 3 | | Q4,Q1 | P6,P5 | L4,L1 | M6,M5 | N4,N1 | P1,P4 | K4,K1 | J5,J6 | H4,H1 |
| 1 | 1 | 18 | | G4,G1 | F6,F5 | C4,C1 | D6,D5 | F4,F1 | D4,D1 | E4,E1 | D8,D9 | C10,C13 |

FOR MATERIAL REQUIREMENTS SEE DETACHED LIST OF MATERIAL
LM 3614533-00

REVISION LETTER IN LWR RH CORNER APPLIES TO PICTORIAL SHT (S)
LM REV LETTER CONTROLS DOCUMENT

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES
FRACTIONS | DECIMALS | ANGLES
DECIMAL HOLE DIAMETER TOLERANCE
2 THRU 250 .003 .002 | 251 THRU 500 .005 .003 | 501 & LARGER .010 .005
THREADS EXT CL 2A INT CL 2B
MATERIAL
FINISH
NEXT ASSY | EQUIPMENT
APPLICATION

LAY-OUT J. PRYPUTNIEWICZ 1/24/68
DRAFTSMAN J. Pryputniewicz 1/24/68
CHECKED R. Wellington 2-7-68
ENGINEER L. Hay 2-16-68
APPROVAL J. H. 2/16/68
CCT DES

CLASS A
Remington Rand Univac
DIVISION OF SPERRY RAND CORPORATION
TITLE
COMPONENT ASSEMBLY
HSB RECEIVER
CODE IDENT NO
SIZE D
DWG NO 3614533
SCALE 2/1
SHEET 1 OF 1
DO NOT SCALE

DWG NO 3614533 B

**DETACHED LIST OF MATERIAL**

TITLE OF DRAWING FROM WHICH DETACHED: COMPONENT ASSY-HSD RECEIVER

LM | DWG NO. 3614533 | REV. -

ENG PROJ CODE 25 | UNIT OF MEASURE | DWG SIZE D | LIST OF MATERIAL IDENTIFICATION | ISSUE NO. 1

MFG PROJ CODE | L/M CLASS A | DCL C | UNIVAC | CODE IDENT NO. | PIC REV. - | SHEET 1

JAN. 29 68 LIST OF MATERIAL

| QTY REQD | MFG QTY | MFG U/M | FIND | REFERENCE DES A | B | C | CODE IDENT | SIZE | IDENTIFICATION INFO PART OR IDENT NO. DWG NO. | DASH | NOMENCLATURE OR DESCRIPTION | DCL | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | - 4 | | | | | | | | PT NO. 3614533 00 THRU 00 | | * |
| 1 | | | 1 | - - - | - - - | - - - | - - | | 3103087 | 00 | MISSING DRAWING NO. | | * |
| 85 | | Δ | 2 | ~~85~~ | D8 | ~~F5~~ | | C | 3006694 | 00 | TRANSISTOR - SILICON PNP MT210 | M | * |
| | | | R | G8 | J5 | ~~K5~~ | 02 | | | | CASE HEIGHT .167 MAX. | | * |
| | | | R | M5 | ~~N5~~ | ~~P5~~ | 03 | | | | | | * |
| | | | R | Q8 | S5 | ~~T5~~ | 04 | | | | | | * |
| | | | ~~2 V5~~ | | ~~V8~~ | ~~X5~~ | ~~05~~ | | | | | | |
| 5 | | | 3 | G1 | N10 | Q1 | | C | 3010883 | 70 | RESISTOR FXD FILM - | M | * |
| | | | R | W10 | Y1 | | 02 | | | | 8200 OHMS 1/2WATT +- 2% | | * |
| 5 | | | 4 | C1 | H10 | L1 | | C | 3010883 | 72 | RESISTOR FXD FILM - | M | * |
| | | | R | U1 | V10 | | 02 | | | | 10000 OHMS 1/2WATT +- 2% | | * |
| 5 | | | 5 | F1 | L10 | N1 | | C | 2016677 | 49 | RESISTOR FIXED FILM | M | * |
| | | | R | U10 | W1 | | 02 | | | | 3920 OHMS 1/4 WATT +- 1% | | * |
| 5 | | | 6 | D1 | K10 | P1 | | C | 2016676 | 94 | RESISTOR FIXED FILM | M | * |
| | | | R | T10 | X1 | | 02 | | | | 249 OHMS 1/4 WATT +- 1% | | * |
| 5 | | | 7 | E1 | H10 | K1 | | C | 3010883 | 68 | RESISTOR FXD FILM - | M | * |
| | | | R | R10 | S1 | | 02 | | | | 6800 OHMS 1/2WATT +- 2% | | * |

FORM [illegible] (REV. 6/63)

**DETACHED LIST OF MATERIAL**

TITLE OF DRAWING FROM WHICH DETACHED: COMPONENT ASSY-HSD RECEIVER

LM | DWG NO. 3614533 | REV. -

ENG PROJ CODE 25 | UNIT OF MEASURE . | DWG SIZE D | LIST OF MATERIAL IDENTIFICATION | ISSUE NO. 1

MFG PROJ CODE | L/M CLASS A | DCL C | UNIVAC | CODE IDENT NO. | PIC REV. - | SHEET 2

JAN. 29 68 LIST OF MATERIAL

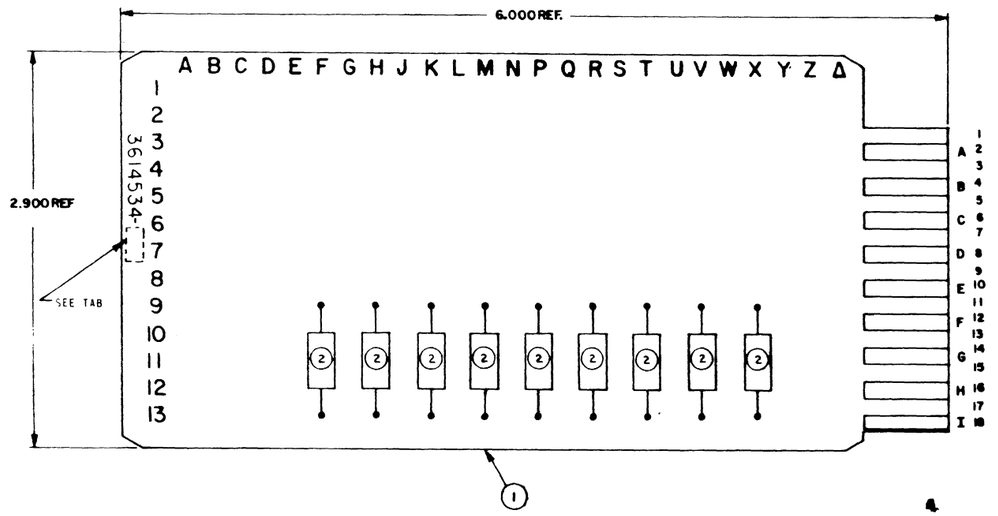
| QTY REQD | MFG QTY | MFG U/M | FIND | REFERENCE DES A | B | C | CODE IDENT | SIZE | IDENTIFICATION INFO PART OR IDENT NO. DWG NO. | DASH | NOMENCLATURE OR DESCRIPTION | DCL | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5 | | | 8 | C10 | F10 | H1 | | C | 3010883 | 52 | RESISTOR FXD FILM - | M | * |
| | | | R | P10 | R1 | | 02 | | | | 1500 OHMS 1/2WATT +- 2% | | * |
| 1 | | | 9 | (Z-DEL | TA 1) | | | C | 2012127 | 09 | CAPACITOR FXD ELECT. AL 15V DC | M | * |
| | | | | | | | | | | | 20 UF -10% +100% | | |
| 1 | | | 10 | (Z-DEL | TA 8) | | | C | 2012128 | 07 | CAPACITOR FXD ELECT AL 25V DC | M | * |
| | | | | | | | | | | | 10 UF -10% +100% | | |
| | | | S01 | - - - | - - - | - - - | - - | | DS00410 | | PRINTED CKT SPEC FOR ASSY OF | M | * |
| | | Δ | S02 | - - - | - - - | - - - | - - | | CS01985 | 00 | GENERAL 1004 TEST SPEC | | |
| | | | S03 | - - - | - - - | - - - | - - | | SH04028 | 00 | MISSING DRAWING NO. | | * |
| | | | S04 | - - - | - - - | - - - | - - | | JS00304 | | SOLDERING OF PRTD CKT BOARDS | M | * |
| | | Δ | 201 | - - - | - - - | - - - | - - | | H 19601 | ~~03~~ 04 | RW | L/M - PIC - REV HISTORY | * |
| 10 | | Δ | 11 | D5 | F5 | N5 | | | 3006833 | 00 | | TRANSISTOR 2T 229 | |
| | | | R | P5 | V5 | X5 | 02 | | | | | | |
| | | | R | K8 | M8 | T8 | 53 | | | | | | |
| | | | R | V8 | MADE ON ITEMS Δ | | 94 | | | | | | |

DELETED DRAWING SHEETS

FORM [illegible] (REV 6/63)

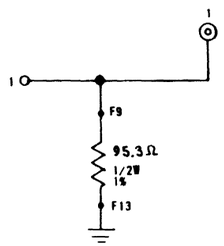
| PART NO | VAR | REMARKS |
|---|---|---|
| 3614534-00 | (1) | SUPERSEDED |
| 3614534-01 | (1) | |

| REVISIONS | | | | | | |
|---|---|---|---|---|---|---|
| ZONE | LTR | EIR | DESCRIPTION – FOR DETAILS SEE EIR | CHK | DATE | APPROVED |
| | — | X19601-4 | RELEASED | | | |
| | A | C 11014-1 | SEE EIR. RELEASE PT-01 | | | |




## NOTES:

1. STRIPE ON DIODE BODY DENOTES CATHODE END.
   ○ INDICATES FIND NO.
   <> INDICATES DESIGNATIONS STAMPED ON COMPONENT FOR REF. ONLY.
   ( ) INDICATES DESIGNATIONS FOR REF. ONLY & SHALL NOT BE STAMPED.
2. UNLESS OTHERWISE DESIGNATED
   - CONTACT A SHALL BE ⏚
   - CONTACT B SHALL BE SPARE
   - CONTACT C SHALL BE → −8V
   - CONTACT D & E SHALL BE → −30V
   - CONTACT F SHALL BE → −20V
   - CONTACT G SHALL BE → +20V
   - CONTACT H SHALL BE SPARE
   - CONTACT I SHALL BE ⏚
3. MINIMUM SPACE FOR THIS BOARD IS .500 INCH
4. ASSEMBLE PER (S01)
5. TEST PER (S02) & (S03)
6. SOLDER PER (S04)




| CIRCUIT | INPUT TERM | TEST TERM | COMPONENTS | |
|---|---|---|---|---|
| 9 | 17 | 11 | P9. P13 | FOR PT 00 & 01 |
| 8 | 15 | 3 | R9. R13 | |
| 7 | 13 | 4 | T9. T13 | FOR PT 00 ONLY |
| 6 | 11 12 | 5 | V9. V13 | |
| 5 | 9 | 6 | X9 X13 | FOR PT 00 & 01 |
| 4 | 7 | 9 | W9 W13 | |
| 3 | 5 | 8 | K9 K13 | |
| 2 | 3 | 7 | H9. H13 | |
| 1 | 1 | 1 | F9. F13 | |

| CIRCUIT | INPUT TERM | TEST TERM | COMPONENTS | |
|---|---|---|---|---|
| 7 | 12. 13 | 4 | T9. T13 | FOR PT 01 ONLY |
| 6 | 11 | 5 | V9. V13 | |

**MULTISTATUS DWG**
SEE L/M FOR PART NUMBER STATUS


**COMPANY CONFIDENTIAL INFORMATION**
THIS DOCUMENT CONTAINS CONFIDENTIAL INFORMATION OF THE SPERRY RAND CORPORATION. IN CONSIDERATION OF THE RECEIPT OF THIS DOCUMENT, THE RECIPIENT AGREES NOT TO REPRODUCE, COPY, USE OR TRANSMIT THIS DOCUMENT AND/OR THE INFORMATION THEREIN CONTAINED, IN WHOLE OR IN PART, OR TO SUFFER SUCH ACTION BY OTHERS, FOR ANY PURPOSE, EXCEPT WITH THE WRITTEN PERMISSION, FIRST OBTAINED, OF SPERRY RAND CORPORATION, AND FURTHER AGREES TO SURRENDER SAME TO SPERRY RAND CORPORATION UPON DEMAND.


| | |
|---|---|
| SHEET | 1 OF 1 |
| REV. | A |
| CARD DESIGN LEVEL | A |

**PART NO.** SEE TAB
[illegible] NO.

FOR MATL REQUIREMENTS SEE L/M, L/M REV LETTER CONTROLS DOCUMENT.

UNLESS OTHERWISE SPECIFIED
DIMENSIONS IN INCHES TOL ON
2 PLACE DECIMALS ± | 3 PLACE DECIMALS ± | ANGLES ±
HOLE DIA TOL
0 THRU .250 + .003 − .002 | .251 THRU .500 + .005 − .003 | .501 & LARGER + .010 − .005
THREADS: EXT CL 2A, INT CL 2B
COMMODITY CODE

| | | DATE |
|---|---|---|
| LAYOUT | | |
| DRAFTSMAN | T. Majeak | 1/29/69 |
| CHECKER | [illegible] | 2-7-68 |
| ENGINEER | [illegible] | 2-10-69 |
| APPROVAL | [illegible] | 2/11/69 |
| MFG ENGINEER | | |

CLASS A — UNIVAC, DIVISION OF SPERRY RAND CORPORATION

TITLE: COMPONENT ASSEMBLY HSB TERMINATION

| SIZE | CODE IDENT NO | DWG NO |
|---|---|---|
| D | | 3614534 |

SCALE 2/1 | WEIGHT | SHEET 1 OF 1

DO NOT SCALE THIS PRINT — A

UNIVAC

**PARTS LIST**

| CODE IDENT | ISSUE DATE | CONTROL | CA | TYPE | COMM CODE | ST |
|---|---|---|---|---|---|---|
| 92120 | 11/14/68 | C 25 | | | | M |

| PL | DWG NO | SHEET | PL REV |
|---|---|---|---|
| | 3614534 | 1 | A |

TITLE OF DWG NO FROM WHICH DETACHED

COMPONENT ASSEMBLY HSB TERMINATION

| CE | U/M |
|---|---|
| A | EA |

| CAGE SIZE | RANGE | TYPE | ISSUE | PIC REV |
|---|---|---|---|---|
| D | 00 | 01 | 2 | A |

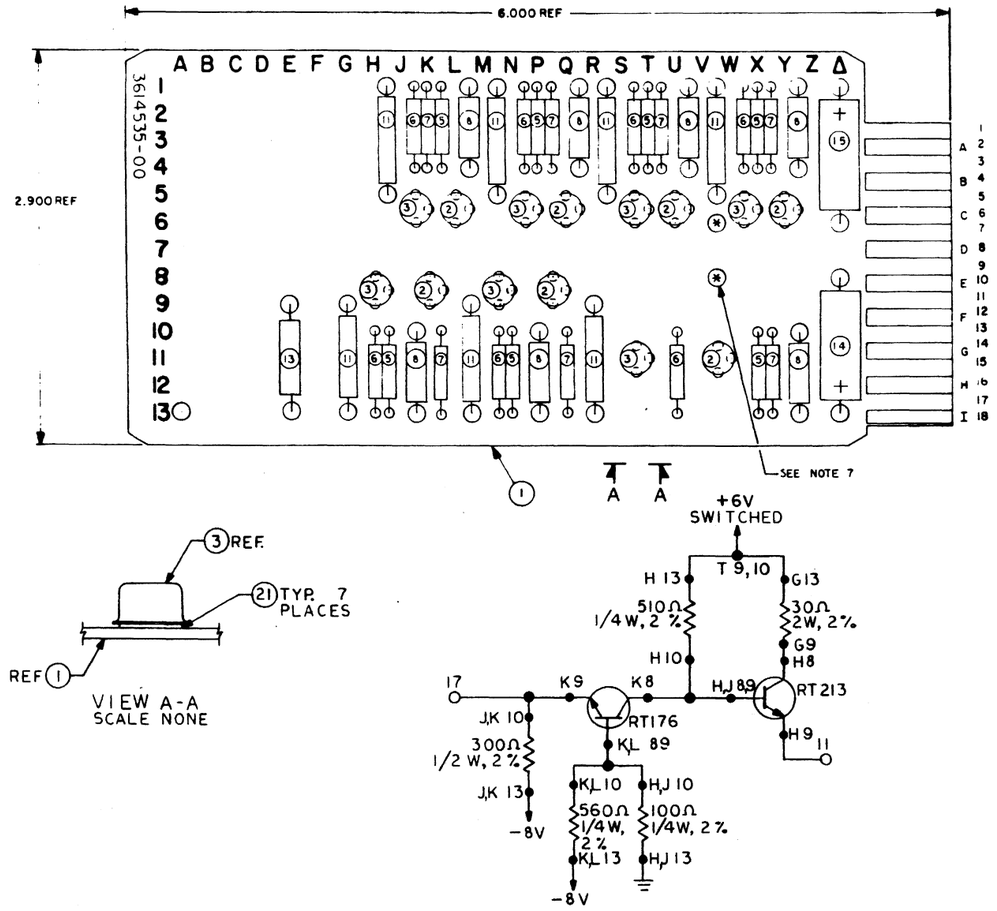
| FIND NO | QUANTITY REQUIRED | U/M | VAR | PART OR IDENT NO DRAWING NO | DASH | NOMENCLATURE OR DESCRIPTION | SP | SEG |
|---|---|---|---|---|---|---|---|---|
| 1 | | | | | | SEE VARIABLE DATA BELOW | | |
| 2 | 9 | EA | C | 2012104 | -94 | RESISTOR, FIXED FILM 95.3 OHMS 1/2 WATT +- 1% | | |
| | | | | REF DES | 1 | F9 H9 K9 M9 P9 R9 T9 V9 X9 | | |
| S01 | | XX | | DS00410 | | PRINTED CKT SPEC FOR ASSY OF | | |
| S02 | | X | A | CS01985 | -00 | GENERAL 1004 TEST SPEC | | |
| S03 | | X | A | SH04029 | -00 | HIGH SPEED BUS TERMINATOR | | |
| S04 | | XX | | DS00304 | | SOLDERING OF PRTD CKT BOARDS | | |
| Z01 | | | | H 19601 | 04 | EIR HISTORY: EIR REV , PL REV -, PIC REV - | | |
| Z02 | | | | C 11014 | 01 | EIR HISTORY: EIR REV , PL REV A, PIC REV A | | |
| | | | | | | 3614534-00 VARIABLE DATA | | |
| R50 | | | | | | ABOVE PT NO SUPERSEDED BY 3614534-01 / / | | |
| 1 | 1 | EA | C | 3163088 | -00 | PRINTED WIRING BOARD HSR TERMINATION | | |
| | | | | | | 3614534-01 VARIABLE DATA | | |
| 1 | 1 | | | 5029782 | -00 | MISSING DRAWING NUMBER | | M |

UDI 1517

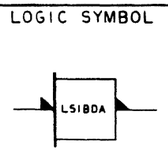
| REVISIONS | | | | | | |
|---|---|---|---|---|---|---|
| ZONE | LTR | EIR | DESCRIPTION – FOR DETAILS SEE EIR | CHK | DATE | APPROVED |
| | – | H19601-4 | RELEASED | RW | 2-7-68 | |
| | A | C10560-1 | SEE EIR | | | |

**NOTES:**

1) STRIPE ON DIODE BODY DENOTES CATHODE END.
   ◯ INDICATES FIND NO.
   <> INDICATES DESIGNATIONS STAMPED ON COMPONENT FOR REF ONLY.
   ( ) INDICATES DESIGNATIONS FOR REF. ONLY & SHALL NOT BE STAMPED.
2) UNLESS OTHERWISE DESIGNATED
   - CONTACT A SHALL BE ⏚
   - CONTACT B SHALL BE SPARE
   - CONTACT C SHALL BE → -8V
   - CONTACTS D & E SHALL BE → -30V
   - CONTACT F SHALL BE → -20V
   - CONTACT G SHALL BE → +20V
   - CONTACT H SHALL BE → SPARE
   - CONTACT I SHALL BE ⏚
3) MINIMUM SPACE FOR THIS BOARD IS .500 INCH.
4) **ASSEMBLE PER** (S01)
5) SOLDER PER (S04)
6) TEST PER (S02) AND (S03)
7) * INTERFACE CONNECTIONS REQUIRED, TO BE PROVIDED BY MANUFACTURING (2 PLACES)




LOGIC SYMBOL




TYPICAL 7 CKTS

| CIRCUITS | INPUT TERMS. | OUTPUT TERMS. | COMPONENTS | | | | | | | | TEST TERMS. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 7 | 15 | 12 | PI0 PI3 | PQ9 PQ8 | MN10 MN13 | QI0 QI3 | NI0 NI3 | MN9 MN8 | LM9 LM13 | | |
| 6 | 14 | 13 | YZI0 YZI3 | VWIII2 VWI0II | UI0 UI3 | XYI0 XYI3 | XI0 XI3 | STIII2 STI0 II | R9 RI3 | | |
| 5 | 4 | 10 | YZ4 YZI | Y6 Y5 | WX4 WXI | XY4 XYI | X4 XI | WX6 WX5 | VW 5 VWI | | |
| 4 | 3 | 5 | UV4 UVI | U6 U5 | ST4 STI | TU4 TUI | T4 TI | ST6 ST5 | RS5 RSI | | |
| 3 | 2 | 6 | QR4 QRI | Q6 Q5 | NP4 NPI | PQ4 PQI | P4 PI | NP6 NP5 | MN5 MNI | | |
| 2 | I | 7 | LM4 LMI | L6 L5 | JK4 JKI | K4 KI | KL4 KLI | JK6 JK5 | HJ5 HJ I | | |
| I | 17 | II | JKI0 JK13 | K9 K8 | HI0 HI3 | KLI0 KL13 | HJI0 HJ13 | H9 H8 | G9 GI3 | | |


COMPANY CONFIDENTIAL INFORMATION

THIS DOCUMENT CONTAINS CONFIDENTIAL INFORMATION OF THE SPERRY RAND CORPORATION IN CONSIDERATION OF THE RECEIPT OF THIS DOCUMENT, THE RECIPIENT AGREES NOT TO REPRODUCE, COPY, USE OR TRANSMIT THIS DOCUMENT AND/OR THE INFORMATION THEREIN CONTAINED, IN WHOLE OR IN PART, OR TO SUFFER SUCH ACTION BY OTHERS, FOR ANY PURPOSE EXCEPT WITH THE WRITTEN PERMISSION, FIRST OBTAINED, OF SPERRY RAND CORPORATION, AND FURTHER AGREES TO SURRENDER SAME TO SPERRY RAND CORPORATION UPON DEMAND


**PART NO.** 3614535-00

FOR MATL REQUIREMENTS SEE L/M, L/M REV LETTER CONTROLS DOCUMENT

| UNLESS OTHERWISE SPECIFIED | | | |
|---|---|---|---|
| DIMENSIONS IN INCHES TOL ON 2 PLACE DECIMALS | 3 PLACE DECIMALS | ANGLES | |
| – | – | – | |
| – | – | – | |
| HOLE DIA. TOL | | | |
| 0 THRU .250 – .003 – .002 | 251 THRU .500 – .005 – .003 | 501 AND LARGER .010 – .005 | |
| THREADS: EXT. CL 2A, INT CL 2B | | | |
| COMMODITY CODE | | | |

| | | |
|---|---|---|
| LAYOUT | R R KOWALCZYK | 1/31/68 |
| DRAFTSMAN | R R KOWALCZYK | 1/31/68 |
| CHECKER | R Wellington | 2-7-68 |
| ENGINEER | | 2/16/68 |
| APPROVAL | | 2/16/68 |

DO NOT SCALE THIS PRINT

CLASS A

UNIVAC
DIVISION OF SPERRY RAND CORPORATION

TITLE COMPONENT ASSEMBLY H. S. B. DRIVER

| SIZE | CODE IDENT NO | DWG NO |
|---|---|---|
| D | | 3614535 |

SCALE 2/1 WEIGHT SHEET 1 OF 1

DWG NO. 3614535

DETACHED LIST OF MATERIAL

COMPONENT ASSY-H S B DRIVER

LM 3614533

UNIVAC

ENG. PROJ. CODE 45 | UNIT OF MEASURE | DWG SIZE D

MFG. PROJ. CODE | L/M CLASS A | DCL C

CODE IDENT NO. 90536 | P.C. REV A

LIST OF MATERIAL IDENTIFICATION | ISSUE NO. 3 | SHEET 1

| QTY. REQD. | MFG. QTY. | MFG. L/M | FIND | REFERENCE DES A | REFERENCE DES B | REFERENCE DES C | CODE IDENT | S Z E | IDENTIFICATION INFO PART OR IDENT NO. | IDENTIFICATION INFO DWG. NO. | IDENTIFICATION INFO DASH | NOMENCLATURE OR DESCRIPTION | D C L |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | PT NO. 3514535 DC THRU 00 | |
| 1 | | | 1 | - - - - - - - - - - | | | | C | 3103049 | 00 | | PRINTED WIRING BOARD | C |
| | | | | | | | | | | | | HSB DRIVER | |
| 7 | | | 2 | L5 | P5 | U5 | | C | 3004301 | 02 | | TRANSISTOR - SILICON, NPN, HT = 175 WITH LEAD SPREADER | H |
| | | | | R Y5 | K8 | | 02 | | | | | | |
| | | | | R P-J1 | (V-A10 -11) | | 03 | | | | | | |
| 7 | | | 3 | J-K5 | N-P5 | S-T5 | | C | 3003707 | 00 | | TRANSISTOR, SILICON, NPN, RT213 CASE HEIGHT .167 MAX. | H |
| | | | | R B-K5 | H8 | M-N8 | 02 | | | | | | |
| | | | | R (S-T10 -11) | | | 03 | | | | | | |
| 7 | | | 5 | K-L1 | P1 | T1 | | C | 4913459 | 29 | | RESISTOR, FIXED, FILM - 100 OHMS, 1/4 WATT, +-2% | H |
| | | | | R X1 | H-J10 | N10 | 02 | | | | | | |
| | | | | R X10 | | | 03 | | | | | | |
| 7 | | | 6 | J-K1 | N-P1 | S-T1 | | C | 4913459 | 41 | | RESISTOR, FIXED, FILM - 510 OHMS, 1/4 WATT, +-2% | H |
| | | | | R W-K1 | H10 | M-N10 | 02 | | | | | | |
| | | | | R U10 | | | 03 | | | | | | |
| 7 | | | 7 | K1 | P-J1 | T-U1 | | C | 4913459 | 42 | | RESISTOR, FIXED, FILM - 560 OHMS, 1/4 WATT, +-2% | H |
| | | | | R X-Y1 | K-L10 | Q10 | 02 | | | | | | |
| | | | | R X-Y10 | | | 03 | | | | | | |

DETACHED LIST OF MATERIAL

COMPONENT ASSY-H S B DRIVER

LM 3614533

UNIVAC

ENG. PROJ. CODE 45 | UNIT OF MEASURE | DWG SIZE D

MFG. PROJ. CODE | L/M CLASS A | DCL C

CODE IDENT NO. 90536 | P.C. REV A

LIST OF MATERIAL IDENTIFICATION | ISSUE NO. 3 | SHEET 2

SEE 2616d LIST OF MATERIAL

| QTY. REQD. | MFG. QTY. | MFG. L/M | FIND | REFERENCE DES A | REFERENCE DES B | REFERENCE DES C | CODE IDENT | S Z E | IDENTIFICATION INFO PART OR IDENT NO. | IDENTIFICATION INFO DWG. NO. | IDENTIFICATION INFO DASH | NOMENCLATURE OR DESCRIPTION | D C L |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7 | | | 8 | L-M1 | Q-R1 | U-V1 | | C | 3010983 | 35 | | RESISTOR FXD FILM - 300 OHMS 1/2WATT +- 2% | H |
| | | | | R Y-Z1 | J-K10 | P10 | 02 | | | | | | |
| | | | | R Y-Z10 | | | 03 | | | | | | |
| 7 | | | 11 | H-J1 | M-N1 | R-S1 | | | 3006844 | 01 | | MISSING PART NO. | * |
| | | | | R V-W1 | G9 | L-M9 | 02 | | | | | | |
| | | | | R R9 | | | 03 | | | | | | |
| 1 | | | 13 | E9 | | | | C | 2012105 | 93 | | RESISTOR, FIXED FILM 392 OHMS 1/2 WATT +- 1% | H |
| 1 | | | 14 | (DELTA 8) | | | | C | 2012128 | 07 | | CAPACITOR FXD ELECT AL 25V DC 10 UF -10% +100% | H |
| 1 | | | 15 | (DELTA 1) | | | | C | 2012127 | 09 | | CAPACITOR FXD ELECT, AL 15V DC 20 UF -10% +100% | H |
| 7 | | | 21 | - - - | - - - | - - - | - - | C | 4912263 | 00 | | ADAPTER, TRANSISTOR HOLDER | H |
| | | | S01 | - - - | - - - | - - - | - - | | DS00410 | | | PRINTED CKT SPEC FOR ASSY OF | H |
| | | | S02 | - - - | - - - | - - - | - - | A | CS01985 | 00 | | GENERAL 1004 TEST SPEC | C |
| | | | S03 | - - - | - - - | - - - | - - | A | SH04030 | 00 | | HIGH SPEED BUS DRIVER | C |

DETACHED LIST OF MATERIAL

COMPONENT ASSY-H S B DRIVER

LM 3614533

UNIVAC

CODE IDENT NO. 90536 | P.C. REV A

LIST OF MATERIAL IDENTIFICATION | ISSUE NO. 3 | SHEET 3

| QTY. REQD. | FIND | REFERENCE DES | NOMENCLATURE OR DESCRIPTION | D C L |
|---|---|---|---|---|
| | S04 | - - - - - - - - - - | SOLDERING OF PRINTED BOARDS | H |
| | Z01 | - - - - - - - - - - | L/M - PIC - REV HISTORY | H |
| | △S02 | - - - - - - - - - - | 90536 SI REV A FOR A REV HISTORY | |

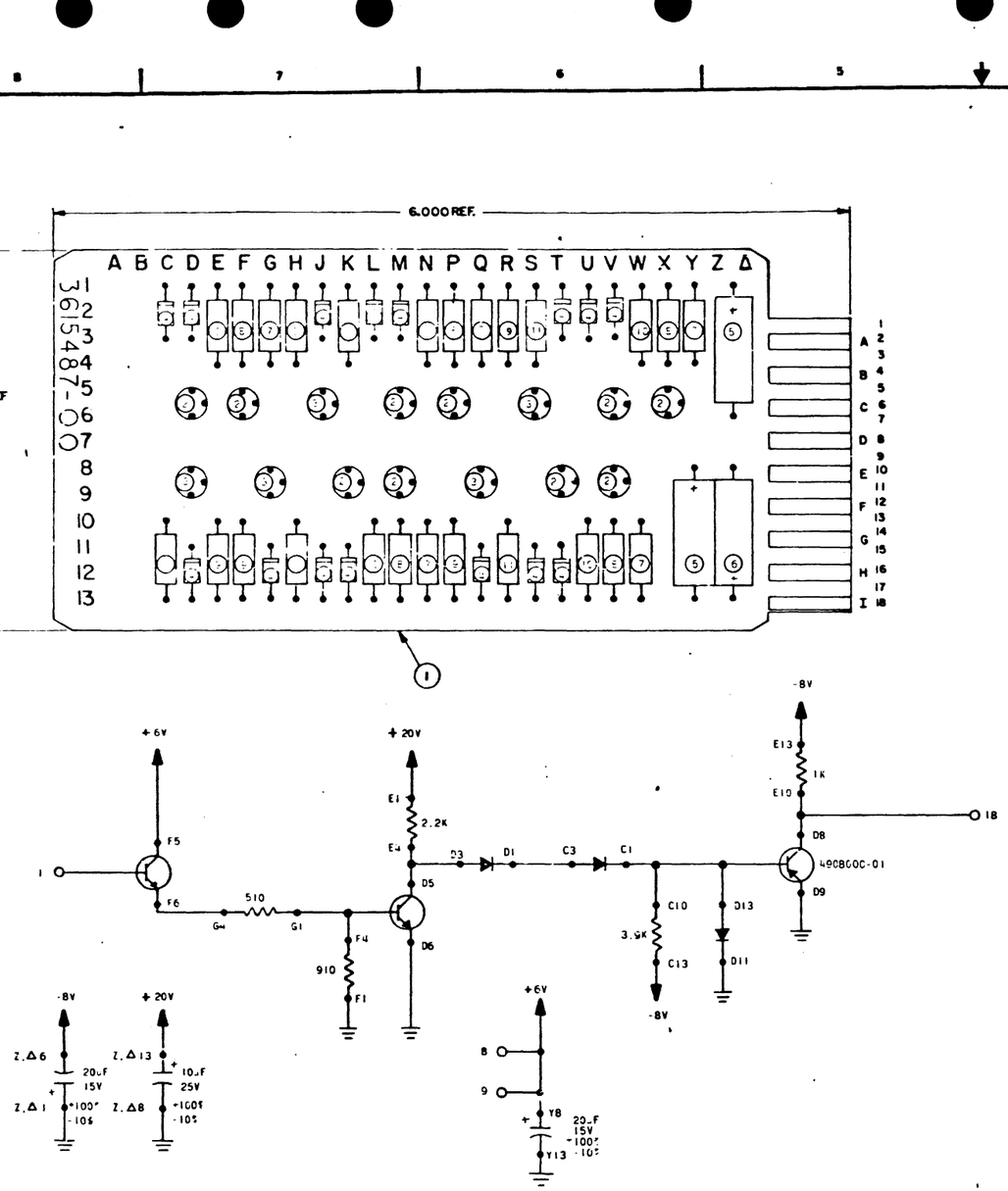
SHEET 3 OF 3

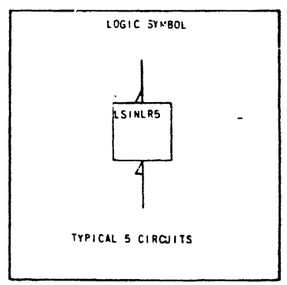
| REVISIONS | | | | | | |
|---|---|---|---|---|---|---|
| ZONE | LTR | ECR | DESCRIPTION – FOR DETAILS SEE ECR | CHK | DATE | APPROVED |
| | – | 617884-10 617885-30 | RELEASE PT. -00 | [illegible] | 8-8-67 | [illegible] |
| | A | 617884-10 617885-30 | SEE ECR | [illegible] | 1-16-68 | [illegible] |

## NOTES:

1. STRIPE ON DIODE BODY DENOTES CATHODE END.
   ○ INDICATES FIND NO.
   <> INDICATES DESIGNATIONS STAMPED ON COMPONENT FOR REF. ONLY.
   ( ) INDICATES DESIGNATIONS FOR REF. ONLY & SHALL NOT BE STAMPED.
2. UNLESS OTHERWISE DESIGNATED
   - CONTACT A SHALL BE ⏚
   - CONTACT B SHALL BE SPARE
   - CONTACT C SHALL BE —●— -8V
   - CONTACT D & E SHALL BE —●— -30V
   - CONTACT F SHALL BE —●— -20V
   - CONTACT G SHALL BE —●— +20V
   - CONTACT H SHALL BE SPARE
   - CONTACT I SHALL BE ⏚
3. MINIMUM SPACE FOR THIS BOARD IS .500 INCH
4. ASSEMBLE PER (S01)
5. TEST PER (S02) & (S03)
6. SOLDER PER (S04)
7. UNLESS OTHERWISE SPECIFIED:
   RESISTORS VALUES ARE IN OHMS, ¼ 2W 2%.
   DIODES ARE EM179.
   TRANSISTORS ARE RT176.




| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5 | 16 | 17 | | V8,V9 | R10,R15 | R10,R17 | R8,R9 | C13,L10 | Y13,K11 | J13,J11 | R10,R13 | Q13,Q11 | C8,Q9 | P13,P10 |
| 4 | 10 | 12 | | V2,V9 | R10,R15 | Y10,V3 | T8,T9 | J13,J10 | T13,T11 | S13,S11 | R10,R13 | Q13,Q11 | C8,Q9 | P13,P10 |
| 3 | 6 | 5 | | V5,V6 | T4,T1 | X-,X1 | V5,V6 | M1,M4 | V3,V1 | J3,J1 | S4,S1 | T3,T1 | S5,S6 | R1,R4 |
| 2 | 4 | 3 | | P5,P6 | P4,P1 | P4,P1 | M5,M6 | M1,M4 | V3,M1 | L3,L1 | R1,R1 | J3,J1 | J5,J6 | H1,H4 |
| 1 | 1 | 18 | | F5,F6 | F4,F1 | F4,F1 | D5,D6 | E1,E4 | D2,D1 | C3,C1 | L10,C13 | D10,D11 | D8,D9 | E13,E10 |
| CIRCUITS | INPUT TERMS | OUTPUT TERMS | TEST TERMS | COMPONENTS | | | | | | | | | | |


COMPANY CONFIDENTIAL INFORMATION

THIS DOCUMENT CONTAINS CONFIDENTIAL INFORMATION OF THE SPERRY RAND CORPORATION. IN CONSIDERATION OF THE RECEIPT OF THIS DOCUMENT, THE RECIPIENT AGREES NOT TO REPRODUCE, COPY, USE OR TRANSMIT THIS DOCUMENT AND/OR THE INFORMATION THEREIN CONTAINED IN WHOLE OF IN PART, OR TO SUFFER SUCH ACTION BY OTHERS, FOR ANY PURPOSE, EXCEPT WITH THE WRITTEN PERMISSION FIRST OBTAINED OF SPERRY RAND CORPORATION, AND FURTH R AGREES TO SURRENDER SAME TO SPERRY RAND CORPORATION UPON DEMAND.


| | |
|---|---|
| SHEET | 1 |
| REV. | A |
| CARD DESIGN LEVEL | |

PART NO. 3615487-00
~~DENE NO.~~

FOR MATL REQUIREMENTS SEE L/M, L/M REV LETTER CONTROLS DOCUMENT

| | | |
|---|---|---|
| UNLESS OTHERWISE SPECIFIED | LAYOUT S. Mc QUADE | DATE 12/1/66 |
| DIMENSIONS IN INCHES TOL ON 2 PLACE DECIMALS ± / 3 PLACE DECIMALS ± / ANGLES ± | DRAFTSMAN D. St Landis | 12-15-66 |
| | CHECKER [illegible] | 8-8-67 |
| HOLE DIA TOL: 0 THRU 250 +.003 −.002; 251 THRU 500 +.005 −.003; 501 & LARGER +.010 −.005 | ENGINEER H. STIEHL | 2-16-67 |
| THREADS EXT CL 2A, INT CL 2B | APPROVAL [illegible] | 2-23-67 |
| COMMODITY CODE | MFG ENGINEER [illegible] | 2/23/67 |

CLASS A — UNIVAC, DIVISION OF SPERRY RAND CORPORATION

TITLE: COMPONENT ASSEMBLY HSB RECEIVER

| SIZE | CODE IDENT NO | DWG NO. |
|---|---|---|
| D | | 3615487 |

SCALE 2/1 | WEIGHT | SHEET 1 OF 1

DO NOT SCALE THIS PRINT

DWG NO. 3615487

**DETACHED LIST OF MATERIAL**

TITLE OF DRAWING FROM WHICH DETACHED: COMPONENT ASSY - HSB RECEIVER

ENG PROC CODE: 25 | UNIT OF MEASURE | DWG SIZE: D | MFG PROC CODE | LM CLASS: A | DCL: C

UNIVAC — DIVISION OF SPERRY RAND CORPORATION

LM | DWG NO: 3615487 | REV: A | LIST OF MATERIAL IDENTIFICATION | ISSUE NO: 3 | CODE IDENT NO | PIC REV: A | SHEET: 1

DEC. 6.67 LIST OF MATERIAL

| QTY REQD | MFG QTY | MFG U M | FIND | REFERENCE DES A | B | C | CODE IDENT | SIZE | IDENTIFICATION INFO PART OR IDENT NO DWG NO | DASH | NOMENCLATURE OR DESCRIPTION | DCL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | - 4 | | | | | | | | PT NO. 3615487 00 THRU 00 | |
| 1 | | | 1 | - - - | - - - | - - - | - - | C | 3154251 | 00 | PRINTED WIRING BOARD | C |
| | | | | | | | | | | | HSB RECEIVER | |
| 10 | | | 2 | D5 | F5 | K8 | | C | 3004800 | 02 | TRANSISTOR - SILICON, NPN, | H |
| | | | | R M5 | M8 | P5 | 02 | | | | RT - 176 WITH LEAD SPREADER | |
| | | | | R T8 | V5 | V8 | 03 | | | | | |
| | | | | R X5 | | | 04 | | | | | |
| 5 | | | 3 | D8 | G8 | J5 | | C | 4908000 | 01 | TRANSISTOR PNP GERMANIUM | H |
| | | | | R Q3 | S5 | | 02 | | | | HAS LEAD SPREADER | |
| 15 | | | 4 | C1 | D1 | D11 | | C | 3005687 | 00 | SEMICONDUCTOR DEVICE, DIODE- | H |
| | | | | R G11 | J1 | J1. | 02 | | | | SILICON, EM179 | |
| | | | | R K11 | L1 | M1 | 03 | | | | | |
| | | | | R Q11 | S11 | T1 | 04 | | | | | |
| | | | | R T11 | U1 | V1 | 05 | | | | | |
| 2 | | | 5 | Y8 | (Z DEL | TA 1) | | C | 2012127 | 09 | CAPACITOR FXD ELECT, AL 15V DC | H |
| | | | | | | | | | | | 20 UF -10% +100% | |
| 1 | | | 6 | (Z DEL | TA 8) | | | C | 2012129 | 07 | CAPACITOR FXD ELECT AL 25V DC | H |
| | | | | | | | | | | | 10 UF -10% +100% | |

FORM = A 1648 V REV 6 63

**DETACHED LIST OF MATERIAL**

TITLE OF DRAWING FROM WHICH DETACHED: COMPONENT ASSY - HSB RECEIVER

ENG PROC CODE: 25 | UNIT OF MEASURE | DWG SIZE: D | MFG PROC CODE | LM CLASS: A | DCL: C

UNIVAC — DIVISION OF SPERRY RAND CORPORATION

LM | DWG NO: 3615487 | REV: A | LIST OF MATERIAL IDENTIFICATION | ISSUE NO: 3 | CODE IDENT NO | PIC REV: A | SHEET: 2

DEC. 6.67 LIST OF MATERIAL

| QTY REQD | MFG QTY | MFG U M | FIND | REFERENCE DES A | B | C | CODE IDENT | SIZE | IDENTIFICATION INFO PART OR IDENT NO DWG NO | DASH | NOMENCLATURE OR DESCRIPTION | DCL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5 | | | 7 | G1 | M10 | Q1 | | C | 3010883 | 41 | RESISTOR FXD FILM - | H |
| | | | | R M10 | Y1 | | 02 | | | | 510 OHMS 1/2WATT +- 2% | |
| 5 | | | 8 | F1 | M10 | P1 | | C | 3010883 | 47 | RESISTOR FXD FILM - | H |
| | | | | R V10 | X1 | | 02 | | | | 910 OHMS 1/2WATT +- 2% | |
| 5 | | | 9 | E10 | F10 | H1 | | C | 3010883 | 48 | RESISTOR FXD FILM - | H |
| | | | | R P10 | R1 | | 02 | | | | 1000 OHMS 1/2WATT +- 2% | |
| 5 | | | 10 | E1 | L10 | N1 | | C | 3010883 | 56 | RESISTOR FXD FILM - | H |
| | | | | R U10 | W01 | | 02 | | | | 2200 OHMS 1/2WATT +- 2% | |
| 5 | | | 11 | C10 | H10 | K1 | | C | 3010883 | 62 | RESISTOR FXD FILM - | I |
| | | | | R R10 | S1 | | 02 | | | | 3900 OHMS 1/2WATT +- 2% | |
| | | | S01 | - - - | - - - | - - - | - - | | DS00410 | | PRINTED CKT SPEC FOR ASSY OF | H |
| | | | S02 | NOTE: CHANGE SHEETS | | | | A | CS01985 | 00 | GENERAL 1004 TEST SPEC | C |
| | | | S03 | MADE ON ITEM △ | | | | | SH03592 | 00 | TEST SPEC HSB RECEIVER | H |
| | | | S04 | | | | | | DS00304 | | SOLDERING OF PRTD CKT BOARDS | H |
| | | | Z01 | - - - | - - - | - - - | - - | | H 17584 | 10 | L/M - PIC - REV HISTORY | |
| | | | △Z02 | - - - | - - - | - - - | - - | | H19065 | 01 | L/M A PIC A REV HISTORY | |

SHEET 2 OF 2

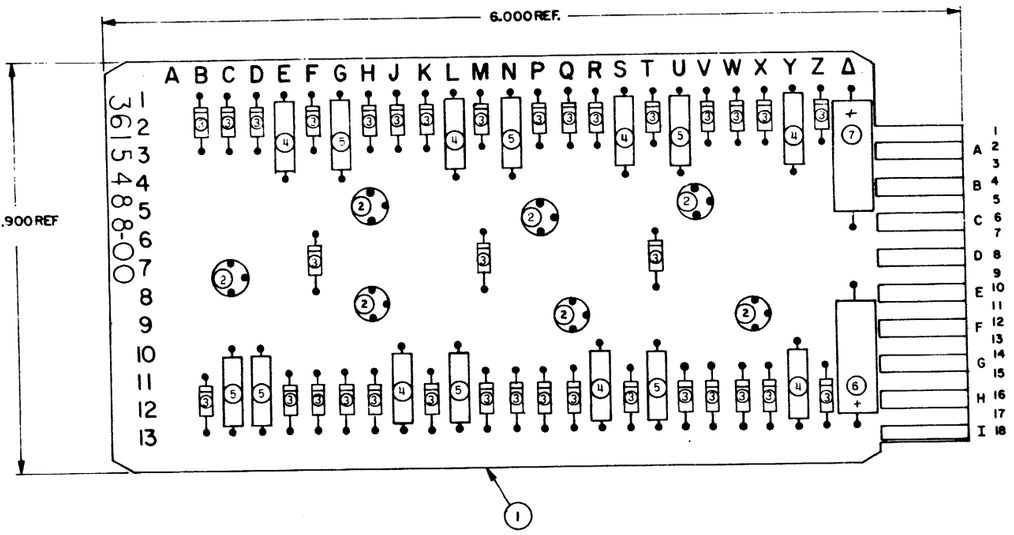
FORM = A 1648 V (REV 6 63)

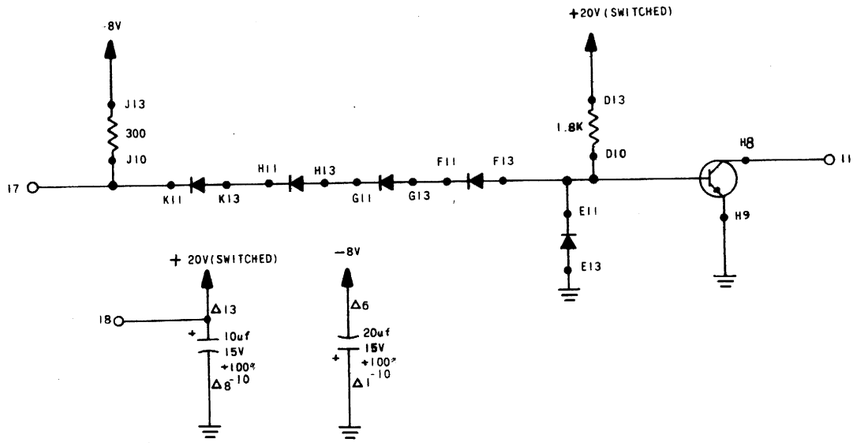
| REVISIONS | | | | | | |
|---|---|---|---|---|---|---|
| ZONE | LTR | EIR | DESCRIPTION — FOR DETAILS SEE EIR | CHK | DATE | APPROVED |
| | - | H17584-10 | RELEASE PT-00 | | 8-3-67 | |

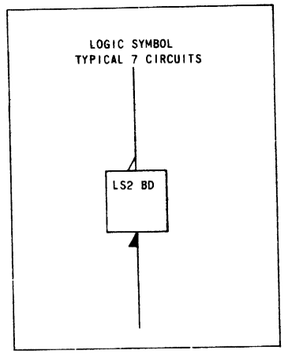
## NOTES:

1. STRIPE ON DIODE BODY DENOTES CATHODE END.
   ◯ INDICATES FIND NO.
   <> INDICATES DESIGNATIONS STAMPED ON COMPONENT FOR REF. ONLY.
   ( ) INDICATES DESIGNATIONS FOR REF. ONLY & SHALL NOT BE STAMPED.
2. UNLESS OTHERWISE DESIGNATED
   - CONTACT A SHALL BE ⏚
   - CONTACT B SHALL BE SPARE
   - CONTACT C SHALL BE —— -8V
   - CONTACT D & E SHALL BE —— -30V
   - CONTACT F SHALL BE —— -20V
   - CONTACT G SHALL BE —— +20V
   - CONTACT H SHALL BE SPARE
   - CONTACT I SHALL BE ⏚
3. MINIMUM SPACE FOR THIS BOARD IS .500 INCH
4. ASSEMBLE PER (S01)
5. TEST PER (S02) & (S03)
6. SOLDER PER (S04)

7. UNLESS OTHERWISE SPECIFIED:
   RESISTOR VALUES ARE IN OHMS, 1.2W, 2%;
   DIODES ARE EM179; TRANSISTORS ARE RT176.




| CIRCUITS | INPUT TERMS | OUTPUT TERMS | TESTS TERMS | COMPONENTS | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 7 | 15 | 12 | | R10,R13 | S11,S13 | Q11,Q13 | P11,P13 | N11,N13 | L10,L13 | M11,M13 | 08,9;09,10 |
| 6 | 14 | 13 | | Y10 Y13 | Z11,Z13 | X11,X13 | W11,W13 | V11,V13 | T10,T13 | U11,U13 | WX,89;WX,910 |
| 5 | 4 | 10 | | E1,E4 | F1,F3 | D1,D3 | C1,C3 | B1,B3 | C10,C13 | B11,B13 | C7,C8 |
| 4 | 3 | 5 | | L1,L4 | M1,M3 | K1,K3 | J1,J3 | H1,H3 | G1,G4 | F6,F8 | H4,5;H5,6 |
| 3 | 2 | 6 | | S1,S4 | T1,T3 | R1,P3 | Q1,Q3 | P1,P3 | N1,N4 | M6,M8 | P5,P6 |
| 2 | 1 | 7 | | Y1,Y4 | Z1,Z3 | X1,X3 | W1,W3 | V1,V3 | U1,U4 | T6,T8 | U,V56;W6,7 |
| 1 | 17 | 11 | | J10,J13 | K11,K13 | H11,H13 | G11,G13 | F11,F13 | D10,D13 | E11,E13 | H8,H9 |


COMPANY CONFIDENTIAL INFORMATION

THIS DOCUMENT CONTAINS CONFIDENTIAL INFORMATION OF THE SPERRY RAND CORPORATION IN CONSIDERATION OF THE RECEIPT OF THIS DOCUMENT. THE RECIPIENT AGREES NOT TO REPRODUCE, COPY, USE OR TRANSMIT THIS DOCUMENT AND/OR THE INFORMATION THEREIN CONTAINED, IN WHOLE OR IN PART, OR TO SUFFER SUCH ACTION BY OTHERS, FOR ANY PURPOSE EXCEPT WITH THE WRITTEN PERMISSION FIRST OBTAINED OF SPERRY RAND CORPORATION, AND FURTHER AGREES TO SURRENDER SAME TO SPERRY RAND CORPORATION UPON DEMAND.


| | |
|---|---|
| SHEET | 1 |
| REV. | - |
| CARD DESIGN LEVEL | |

PART NO. 3615488-00
~~IDENT NO.~~

FOR MATL REQUIREMENTS SEE L/M, L/M REV LETTER CONTROLS DOCUMENT.

UNLESS OTHERWISE SPECIFIED
DIMENSIONS IN INCHES TOL ON
2 PLACE DECIMALS ± | 3 PLACE DECIMALS ± | ANGLES ±
HOLE DIA TOL
0 THRU .250 +.003 −.002 | .251 THRU .500 +.005 −.003 | .501 & LARGER +.010 −.005
THREADS: EXT CL 2A, INT CL 2B
COMMODITY CODE

| | | |
|---|---|---|
| LAYOUT | S MC QUADE | 12-20-66 |
| DRAFTSMAN | D. L. Landis | 12-20-66 |
| CHECKER | | 12-3-67 |
| ENGINEER | H. STIEHLE | -13-67 |
| APPROVAL | | 12/13/67 |
| MFG ENGINEER | | 12/1/67 |

CLASS A

UNIVAC
DIVISION OF SPERRY RAND CORPORATION

TITLE
COMPONENT ASSEMBLY
HSB DRIVER

| SIZE | CODE IDENT NO | DWG NO. |
|---|---|---|
| D | | 3615488 |

SCALE 2/1 | WEIGHT | SHEET 1 OF 1

DO NOT SCALE THIS PRINT

DWG NO. 3615488 B

UDI-457 99/65-15 2-65

## DETACHED LIST OF MATERIAL

COMPONENT ASSY - HSB DRIVER

UNIVAC

LM 3615488 A

MAR. 2 '67

PT NO. 3615488 00 THRU 00

| QTY REQ | SMC QTY | REFERENCE DES A | B | C | CODE IDENT | PART OR IDENT NO | DASH NO | NOMENCLATURE OR DESCRIPTION | DCL |
|---|---|---|---|---|---|---|---|---|---|
| 1 | | 1 | | | C | 3164252 | 00 | PRINTED WIRING BOARD | M |
| | | | | | | | | HSB DRIVER | |
| 7 | | 2 C7 | M4.5 | M8 | C | 3004800 | 02 | TRANSISTOR - SILICON, NPN, | M |
| | | R P5 | 29.9 | U.V5 | 02 | | | KT - 175 WITH LEAD SPREADER | |
| | | R W.R.F.9 | | | 03 | | | | |
| 35 | | 3 M1 | N11 | C1 | C | 3005657 | 00 | SEMICONDUCTOR DEVICE, DIODE- | M |
| | | R D1 | E11 | F1 | 02 | | | SILICON, EM179 | |
| | | R F6 | F11 | G11 | 03 | | | | |
| | | R H1 | H11 | J1 | 04 | | | | |
| | | R K1 | K11 | M1 | 05 | | | | |
| | | R M6 | M11 | N11 | 06 | | | | |
| | | R P1 | P11 | U1 | 07 | | | | |
| | | R U11 | M1 | S11 | 08 | | | | |
| | | R T1 | T6 | U11 | 09 | | | | |
| | | R V1 | V11 | W1 | 10 | | | | |
| | | R W11 | X1 | X11 | 11 | | | | |
| | | R Z1 | Z11 | | 12 | | | | |

## DETACHED LIST OF MATERIAL

COMPONENT ASSY - HSB DRIVER

UNIVAC

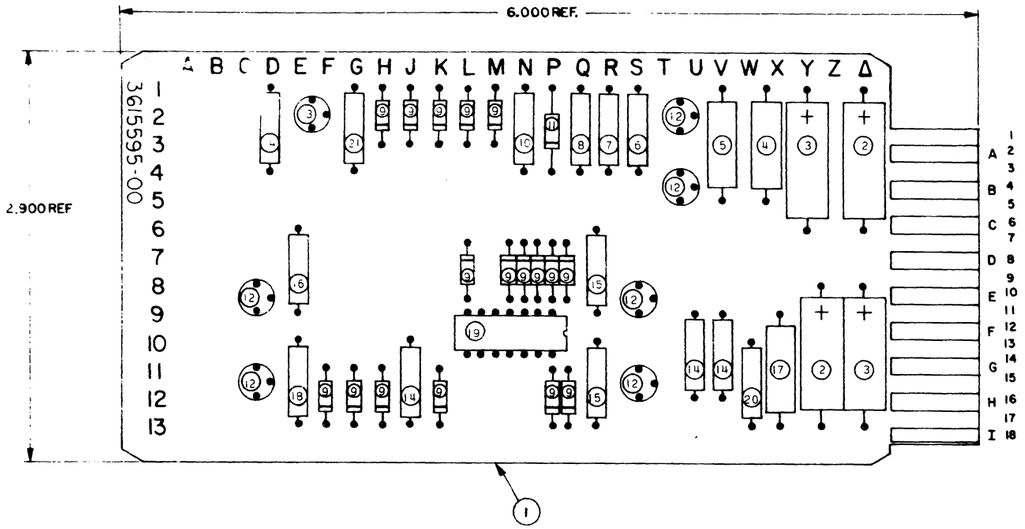
LM 3615488 A

MAR. 2 '67

SHEET 2

| QTY REQ | SMC QTY | REFERENCE DES A | B | C | CODE IDENT | PART OR IDENT NO | DASH NO | NOMENCLATURE OR DESCRIPTION | DCL |
|---|---|---|---|---|---|---|---|---|---|
| 7 | | 4 E1 | U10 | L1 | C | 3010883 | 35 | RESISTOR FXD FILM - | M |
| | | R N10 | S1 | Y1 | 02 | | | 300 OHMS 1/2WATT +- 2% | |
| | | R Y10 | | | 03 | | | | |
| 7 | | 5 C10 | D10 | G1 | C | 3010883 | 54 | RESISTOR FXD FILM - | M |
| | | R L10 | N1 | Y10 | 02 | | | 1800 OHMS 1/2WATT +- 2% | |
| | | R U1 | | | 03 | | | | |
| 1 | | 6 (DELTA | 81) | | C | 2012128 | 07 | CAPACITOR FXD ELECT AL 25V DC | M |
| | | | | | | | | 10 UF -10% +100% | |
| 1 | | 7 (DELTA | 11) | | C | 2012127 | 09 | CAPACITOR FXD ELECT, AL 15V DC | M |
| | | | | | | | | 20 UF -10% +100% | |
| | | S01 | | | | DS00410 | | PRINTED CKT SPEC FOR ASSY OF | M |
| | | S02 | | | A | CS01985 | 00 | GENERAL 100% TEST SPEC | C |
| | | S03 | | | | SM03595 | 00 | TEST SPEC HSB DRIVER | M |
| | | S04 | | | | DS00304 | | SOLDERING OF PRTD CKT BOARDS | M |
| | | Z01 | | | | M 17584 | 10 | L/M - PIC - REV HISTORY | |
| | | Z02 | | | | M 18384 | 01 | L/M A PIC - REV HISTORY | |

Released 5-29-67




## NOTES:

1. STRIPE ON DIODE BODY DENOTES CATHODE END.
   ◯ INDICATES FIND NO.
   <> INDICATES DESIGNATIONS STAMPED ON COMPONENT FOR REF. ONLY.
   ( ) INDICATES DESIGNATIONS FOR REF. ONLY & SHALL NOT BE STAMPED.
2. UNLESS OTHERWISE DESIGNATED
   - CONTACT A SHALL BE ⏚
   - CONTACT B SHALL BE SPARE
   - CONTACT C SHALL BE —▬— −8V
   - CONTACT D & E SHALL BE —▬— −30V
   - CONTACT F SHALL BE —▬— −20V
   - CONTACT G SHALL BE —▬— +20V
   - CONTACT H SHALL BE SPARE
   - CONTACT I SHALL BE ⏚
3. MINIMUM SPACE FOR THIS BOARD IS .500 INCH
4. ASSEMBLE PER (S01)
5. TEST PER (S02) & (S03)
6. SOLDER PER (S04)
7. 
8. UNLESS OTHERWISE SPECIFIED:
   RESISTOR VALUES ARE IN OHMS, 1 2W, 2%
   DIODES ARE EM179: TRANSISTORS ARE RT176.

| REVISIONS | | | | | | |
|---|---|---|---|---|---|---|
| ZONE | LTR | EIR | DESCRIPTION – FOR DETAILS SEE EIR | CHK | DATE | APPROVED |
| | – | H-17564 | RELEASE PT-00 | | 12-8-66 | |
| | | | | | | |


COMPANY CONFIDENTIAL INFORMATION

THIS DOCUMENT CONTAINS CONFIDENTIAL INFORMATION OF THE SPERRY RAND CORPORATION IN CONSIDERATION OF THE RECEIPT OF THIS DOCUMENT, THE RECIPIENT AGREES NOT TO REPRODUCE, COPY, USE OR TRANSMIT THIS DOCUMENT AND/OR THE INFORMATION THEREIN CONTAINED, IN WHOLE OR IN PART, OR TO SUFFER SUCH ACTION BY OTHERS, FOR ANY PURPOSE, EXCEPT WITH THE WRITTEN PERMISSION, FIRST OBTAINED, OF SPERRY RAND CORPORATION, AND FURTHER AGREES TO SURRENDER SAME TO SPERRY RAND CORPORATION UPON DEMAND.


| | | |
|---|---|---|
| SHEET | 1 | 2 |
| REV. | – | – |
| CARD DESIGN LEVEL | | |

PART NO. 3615595-00
~~IDENT NO.~~

FOR MATL REQUIREMENTS SEE L/M, L/M REV LETTER CONTROLS DOCUMENT.

UNLESS OTHERWISE SPECIFIED
DIMENSIONS IN INCHES TOL ON
2 PLACE DECIMALS ± | 3 PLACE DECIMALS ± | ANGLES ±

HOLE DIA TOL
0 THRU .250 +.003 −.002 | .251 THRU .500 ±.005 −.003 | .501 & LARGER +.010 −.005

THREADS: EXT CL 2A, INT CL 2B

COMMODITY CODE

| | | |
|---|---|---|
| LAYOUT | J. D. MORRIS | 12-9-66 |
| DRAFTSMAN | D. B. Landis | 12-29-66 |
| CHECKER | | 1-3-67 |
| ENGINEER | H. E. Stall | 2-13-67 |
| APPROVAL | | 2-13-67 |
| MFG ENGINEER | | 2/14/67 |

CLASS A

UNIVAC
DIVISION OF SPERRY RAND CORPORATION

TITLE
COMPONENT ASSEMBLY
PROBE PROPAGATION

SIZE D | CODE IDENT NO. | DWG NO. 3615595

SCALE 2/1 | WEIGHT | SHEET 1 OF 2

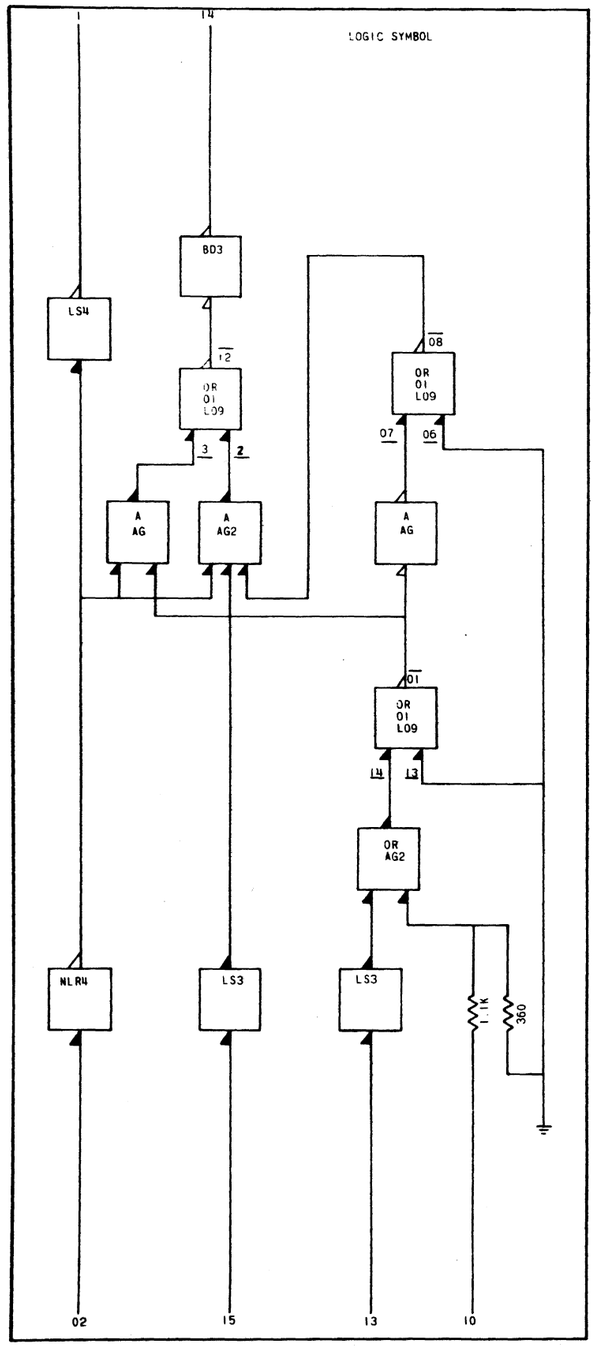
DO NOT SCALE THIS PRINT

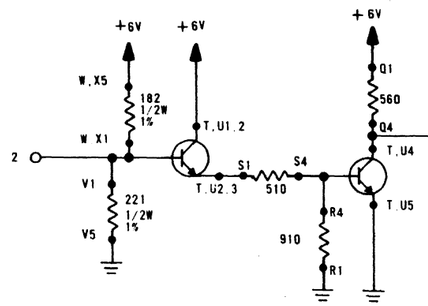
DWG NO. 3615595 B

UDI-457 99/45-15 2-65

| REVISIONS (CONTROLLING PIC REV LEVEL APPEARS ON THE FIRST SHEET) | | | | | | |
|---|---|---|---|---|---|---|
| ZONE | LTR | EIR | DESCRIPTION — FOR DETAILS SEE EIR | CHK | ENGR | APPROVED |

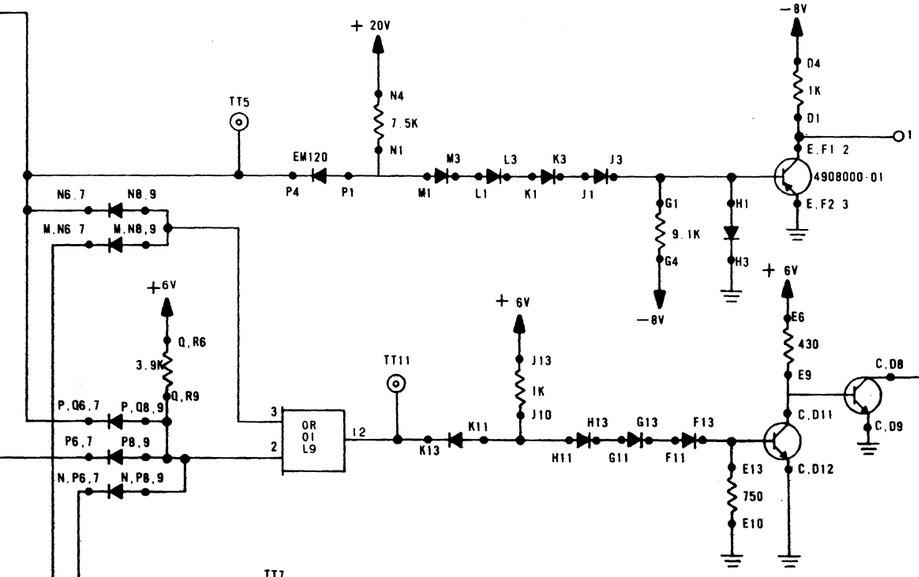
LOGIC SYMBOL










DWG NO. 3615595

| CLASS | UNIVAC DIVISION OF SPERRY RAND CORPORATION | |
|---|---|---|
| A | | |
| SIZE D | CODE IDENT NO. | DWG NO. 3615595 |
| SCALE NONE | WEIGHT | SHEET 2 |

DO NOT SCALE THIS PRINT

DETACHED LIST OF MATERIAL

COMPONENT ASSY

PROBE PROPAGATION

UNIVAC

FEB. 1967

LM 3615595 - 2

| QTY REQ | UNIT OF MEAS | REFERENCE DES | CODE (DASH) | FSCM NO | PART OR IDENT NO | NOMENCLATURE OR DESCRIPTION | D C |
|---|---|---|---|---|---|---|---|
| | | - 4 | | | | PT NO. 3615595 00 THRU 00 | M |
| 1 | 1 | - - - - - - - - - - - - | C | | 3164256 00 | PRINTED WIRING BOARD | M |
| | | | | | | PROBE PROPAGATION | |
| 2 | 2 | YZ3 (DELTA 1) | C | | 2012127 09 | CAPACITOR FXD ELECT. AL 15V DC | M |
| | | | | | | 20 UF -10% +100% | |
| 2 | 3 | Y1 (DELTA 8) | C | | 2012128 07 | CAPACITOR FXD ELECT AL 25V DC | M |
| | | | | | | 10 UF -10% +100% | |
| 1 | 4 | RX1 | C | | 2012105 21 | RESISTOR, FIXED FILM | M |
| | | | | | | 182 OHMS 1/2 WATT +- 1% | |
| 1 | 5 | V1 | C | | 2012105 29 | RESISTOR, FIXED FILM | M |
| | | | | | | 221 OHMS 1/2 WATT +- 1% | |
| 1 | 6 | S1 | C | | 3010883 41 | RESISTOR FXD FILM - | M |
| | | | | | | 510 OHMS 1/2WATT +- 2% | |
| 1 | 7 | H1 | C | | 3010883 47 | RESISTOR FXD FILM - | M |
| | | | | | | 910 OHMS 1/2WATT +- 2% | |
| 1 | 8 | Q1 | C | | 3010883 42 | RESISTOR FXD FILM - | M |
| | | | | | | 560 OHMS 1/2WATT +- 2% | |

DETACHED LIST OF MATERIAL

COMPONENT ASSY

PROBE PROPAGATION

UNIVAC

FEB. 1967

LM 3615595 - 2

| QTY REQ | UNIT OF MEAS | REFERENCE DES | CODE (DASH) | FSCM NO | PART OR IDENT NO | NOMENCLATURE OR DESCRIPTION | D C |
|---|---|---|---|---|---|---|---|
| 1 | 16 | E6 | C | | 3010883 39 | RESISTOR FXD FILM - | M |
| | | | | | | 430 OHMS 1/2WATT +- 2% | |
| 1 | 17 | X9 | C | | 2012105 96 | RESISTOR, FIXED FILM | M |
| | | | | | | 1100 OHMS 1/2 WATT +- 1% | |
| 1 | 18 | E10 | C | | 3010883 45 | RESISTOR FXD FILM - | M |
| | | | | | | 750 OHMS 1/2WATT +- 2% | |
| 1 | 19 | L09 | C | | 3005006 03 | INTEGRATED CIRCUIT - | M |
| | | | | | | QUAD TWO INPUT 'NOR' | |
| 1 | 20 | e10 | C | | 3010883 37 | RESISTOR FXD FILM - | M |
| | | | | | | 360 OHMS 1/2WATT +- 2% | |
| 1 | 21 | G1 | C | | 3010883 71 | RESISTOR FXD FILM - | M |
| | | | | | | 9100 OHMS 1/2WATT +- 2% | |
| | | SD1 - - - - - - - - - - - - | | | 0500410 | PRINTED CKT SPEC FOR ASSY OF | M |
| | | SD2 - - - - - - - - - - - - | A | | C531935 00 | GENERAL 1004 TEST SPEC | C |
| | | SD3 - - - - - - - - - - - - | | | SH03596 00 | TEST SPEC PROBE PROPAGATION | M |
| | | SD4 - - - - - - - - - - - - | | | 0500304 | SOLDERING OF PRTD CKT BOARDS | M |

DETACHED LIST OF MATERIAL

COMPONENT ASSY

PROBE PROPAGATION

UNIVAC

FEB. 1967

LM 3615595 - 2

| QTY REQ | UNIT OF MEAS | REFERENCE DES | CODE (DASH) | FSCM NO | PART OR IDENT NO | NOMENCLATURE OR DESCRIPTION | D C |
|---|---|---|---|---|---|---|---|
| 17 | 9 | F11 G11 H1 | C | | 3004697 00 | SEMICONDUCTOR DEVICE, DIODE- | M |
| | R | H1, J1 K1 02 | | | | SILICON, CM170 | |
| | R | K11 L1 L6+7 03 | | | | | |
| | R | M1 M6+7 N6+7 04 | | | | | |
| | R | NP6+7 P6+7 P11 05 | | | | | |
| | R | PJ6+7 P311 06 | | | | | |
| 1 | 10 | N1 | C | | 3010883 69 | RESISTOR FXD FILM - | M |
| | | | | | | 7500 OHMS 1/2WATT +- 2% | |
| 1 | 11 | P1 | C | | 3010910 00 | SEMICONDUCTOR DEVICE | M |
| | | | | | | DIODE GERMANIUM, EM 120 | |
| 6 | 12 | CD3 CD11 S6 | C | | 3004800 02 | TRANSISTOR - SILICON, NPN, | M |
| | R | S11 TU1+2 TU4 02 | | | | RT - 176 WITH LEAD SPREADER | |
| 1 | 13 | EF1+2 | C | | 4906000 01 | TRANSISTOR PNP GERMANIUM | M |
| | | | | | | MAS LEAD SPREADER | |
| 4 | 14 | D1 J10 U9 | C | | 3010883 48 | RESISTOR FXD FILM - | M |
| | R | V9 02 | | | | 1000 OHMS 1/2WATT +- 2% | |
| 2 | 15 | GR6 GR10 | C | | 3010883 62 | RESISTOR FXD FILM - | M |
| | | | | | | 3900 OHMS 1/2WATT +- 2% | |

DETACHED LIST OF MATERIAL

COMPONENT ASSY

PROBE PROPAGATION

UNIVAC

FEB. 1967

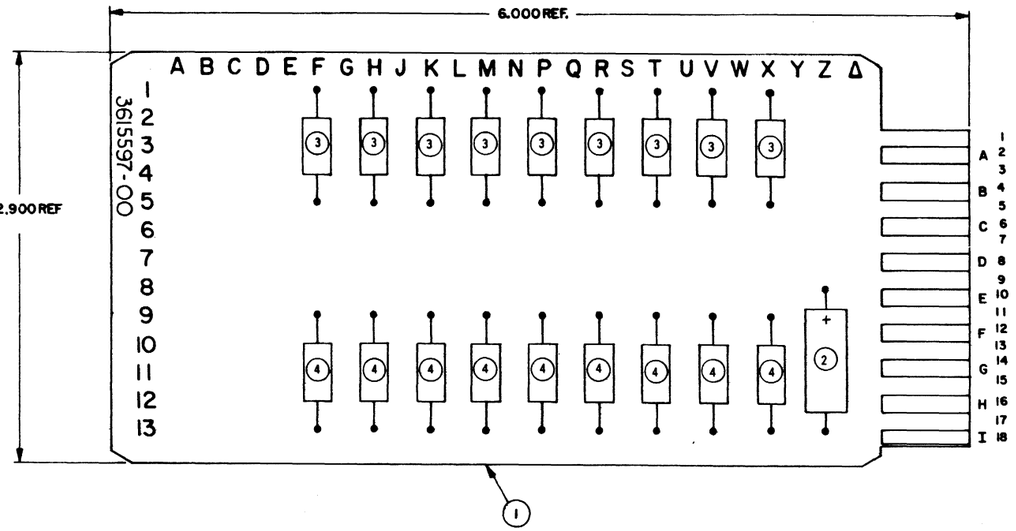
LM 3615595 - 2

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | | Z31 - - - - - - - - - - - - | | H | 17586 10 | | |

L/M - PIC - REV HISTORY

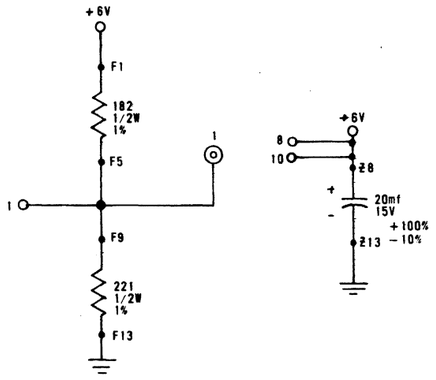
SHEET 6 OF 6

| REVISIONS | | | | | | |
|---|---|---|---|---|---|---|
| ZONE | LTR | EIR | DESCRIPTION — FOR DETAILS SEE EIR | CHK | DATE | APPROVED |
| | - | HI7584-10 | RELEASE PT-00 | | 9-9-67 | |




## NOTES:

1. STRIPE ON DIODE BODY DENOTES CATHODE END.
   ○ INDICATES FIND NO.
   <> INDICATES DESIGNATIONS STAMPED ON COMPONENT FOR REF. ONLY.
   ( ) INDICATES DESIGNATIONS FOR REF. ONLY & SHALL NOT BE STAMPED.
2. UNLESS OTHERWISE DESIGNATED
   - CONTACT A SHALL BE ⏚
   - CONTACT B SHALL BE SPARE
   - CONTACT C SHALL BE → -8V
   - CONTACT D & E SHALL BE → -30V
   - CONTACT F SHALL BE → -20V
   - CONTACT G SHALL BE → +20V
   - CONTACT H SHALL BE SPARE
   - CONTACT I SHALL BE ⏚
3. MINIMUM SPACE FOR THIS BOARD IS .500 INCH
4. ASSEMBLE PER (S01)
5. TEST PER (S02) & (S03)
6. SOLDER PER (S04)




| CIRCUIT | INPUT TERM | TEST TERM | COMPONENTS | |
|---|---|---|---|---|
| 9 | 17 | 11 | P5 P1 | P9 P13 |
| 8 | 15 | 3 | R5 R1 | R9 R13 |
| 7 | 13 | 4 | T5 T1 | T9 T13 |
| 6 | 11 | 5 | V5 V1 | V9 V13 |
| 5 | 9 | 6 | X5 X1 | X9 X13 |
| 4 | 7 | 9 | M5 M1 | M9 M13 |
| 3 | 5 | 8 | K5 K1 | K9 K13 |
| 2 | 3 | 7 | H5 H1 | H9 H13 |
| 1 | 1 | 1 | F5 F1 | F9 F13 |


COMPANY CONFIDENTIAL INFORMATION

THIS DOCUMENT CONTAINS CONFIDENTIAL INFORMATION OF THE SPERRY RAND CORPORATION. IN CONSIDERATION OF THE RECEIPT OF THIS DOCUMENT, THE RECIPIENT AGREES NOT TO REPRODUCE, COPY, USE OR TRANSMIT THIS DOCUMENT AND/OR THE INFORMATION THEREIN CONTAINED, IN WHOLE OR IN PART, OR TO SUFFER SUCH ACTION BY OTHERS, FOR ANY PURPOSE, EXCEPT WITH THE WRITTEN PERMISSION, FIRST OBTAINED, OF SPERRY RAND CORPORATION, AND FURTHER AGREES TO SURRENDER SAME TO SPERRY RAND CORPORATION UPON DEMAND.


| | |
|---|---|
| SHEET | 1 OF 1 |
| REV. | — |
| CARD DESIGN LEVEL | |

**PART NO.** 3615597-00
~~IDENT NO.~~

FOR MATL REQUIREMENTS SEE L/M, L/M REV LETTER CONTROLS DOCUMENT.

UNLESS OTHERWISE SPECIFIED
DIMENSIONS IN INCHES TOL ON
2 PLACE DECIMALS ± | 3 PLACE DECIMALS ± | ANGLES ±
HOLE DIA TOL
0 THRU .250 +.003 −.002 | .251 THRU .500 +.005 −.003 | .501 & LARGER +.010 −.005
THREADS: EXT CL 2A INT CL 2B
COMMODITY CODE

| | | |
|---|---|---|
| LAYOUT | J MORRIS | 1/6/67 |
| DRAFTSMAN | J. F. SEEFELDT | 1/6/67 |
| CHECKER | D Morris | 2-3-67 |
| ENGINEER | W. E. Stahl | 2-13-67 |
| APPROVAL | | |
| MFG ENGINEER | | 2-13-67 |
| | | 2/1/7 |

CLASS A

UNIVAC
DIVISION OF SPERRY RAND CORPORATION

TITLE COMPONENT ASSEMBLY
HSB TERMINATION

SIZE D | CODE IDENT NO. | DWG NO. 3615597

SCALE 2/1 | WEIGHT | SHEET 1 OF 1

DO NOT SCALE THIS PRINT

DWG NO. 3615597 B

UDI-167 99145-15 2-66

# DETACHED LIST OF MATERIAL

TITLE OF DRAWING FROM WHICH DETACHED: COMPONENT ASSEMBLY

HSB TERMINATION

UNIVAC

DEC. 4.67 LIST OF MATERIAL

| | |
|---|---|
| ENG PROJ CODE | 25 |
| UNIT OF MEASURE | |
| DWG. SIZE | D |
| MFG PROJ. CODE | |
| U/M CLASS | A |
| DCL | C |

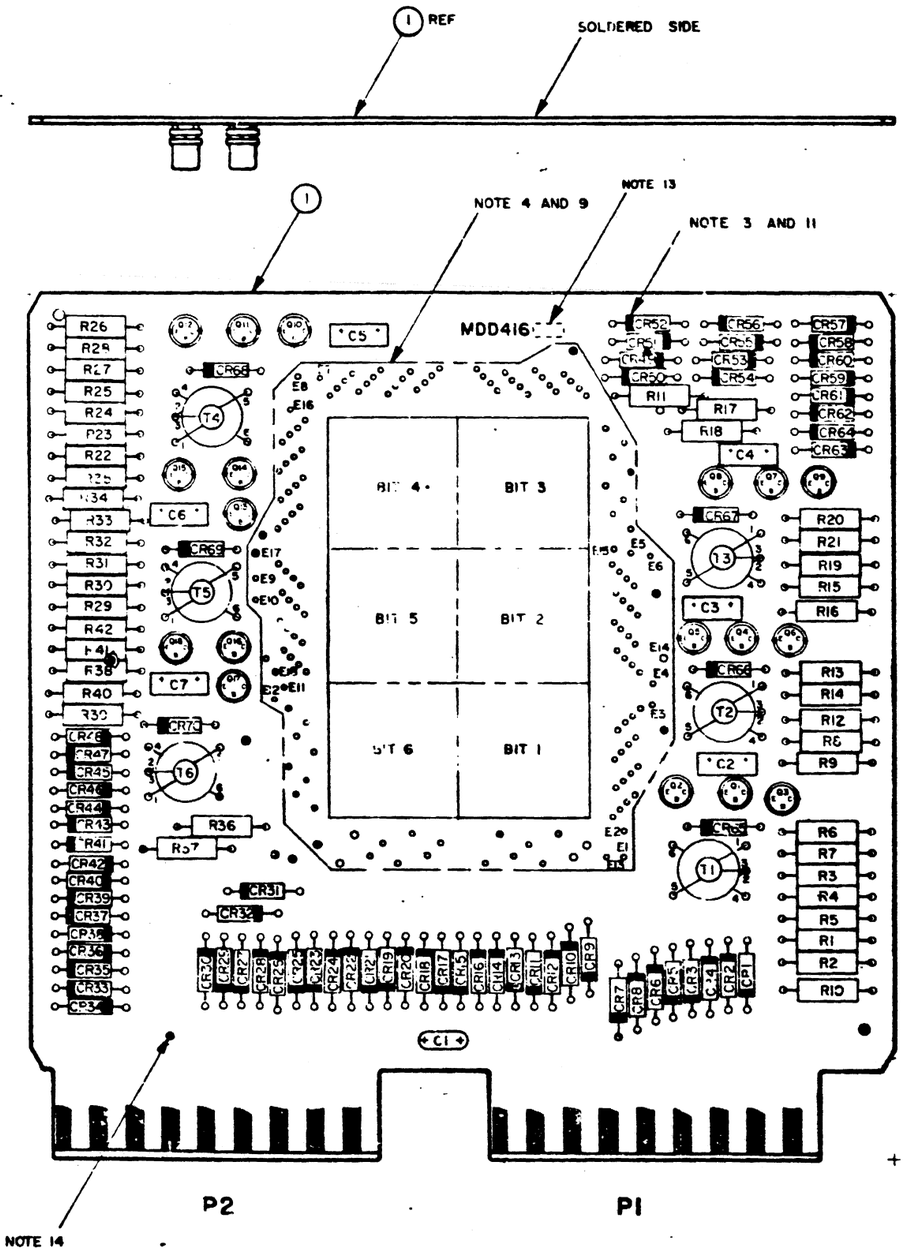
LM — DWG. NO. 3615597 — REV A

LIST OF MATERIAL IDENTIFICATION — ISSUE NO. 2

CODE IDENT. NO. — PIC REV A — SHEET 1

| QTY REQD | MFG QTY. | MFG U/M | FIND | REFERENCE DES A | B | C | CODE IDENT | SIZE | IDENTIFICATION INFO PART OR IDENT NO. DWG. NO. | DASH | NOMENCLATURE OR DESCRIPTION | DC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | - 4 | | | | | | | | PT NO. 3615597 00 THRU 00 | |
| 1 | | | 1 | - - - | - - - | - - - | - - | C | 3164253 | 00 | PRINTED WIRING BOARD | C |
| | | | | | | | | | | | HSB TERMINATION | |
| 1 | | | 2 | Z8 | | | | C | 2012127 | 09 | CAPACITOR FXD ELECT. AL 15V DC | H |
| | | | | | | | | | | | 20 UF -10% +100% | |
| 9 | | | 3 | F1 | H1 | K1 | | C | 2012105 | 21 | RESISTOR, FIXED FILM | H |
| | | | | R M1 | P1 | R1 | 02 | | | | 182 OHMS 1/2 WATT +- 1% | |
| | | | | R T1 | V1 | X1 | 03 | | | | | |
| 9 | Δ | | 4 | ~~F1~~ F9 | ~~H1~~ H9 | ~~K1~~ K9 | | C | 2012105 | 29 | RESISTOR, FIXED FILM | H |
| | Δ | | | R ~~M1~~ M9 | ~~P1~~ P9 | ~~R1~~ R9 | 02 | | | | 221 OHMS 1/2 WATT +- 1% | |
| | Δ | | | R ~~T1~~ T9 | ~~V1~~ V9 | ~~X1~~ X9 | 03 | | | | | |
| | | | | | | | | | | | NOTE: LAST SHEETS MADE ON ITEMS A | |
| | | | S01 | - - - | - - - | - - - | - - | | DS00410 | | PRINTED CKT SPEC FOR ASSY OF | H |
| | | | S02 | - - - | - - - | - - - | - - | A | CS01985 | 00 | GENERAL 1004 TEST SPEC | C |
| | | | S03 | - - - | - - - | - - - | - - | | SH03599 | 00 | TEST SPEC HSB TERMINATION | H |
| | | | S04 | - - - | - - - | - - - | - - | | DS00304 | | SOLDERING OF PRTD CKT BOARDS | H |
| | | | Z01 | - - - | - - - | - - - | - - | | H 17584 | 10 | L/M - PIC - REV HISTORY | |
| | | | ~~Z02~~ | - - - | - - - | - - - | - - | | C10072 | 01 | L/M A PIC A REV HISTORY | |

FORM 2A 1648 V (REV 4 63)




| REVISIONS | | | | | |
|---|---|---|---|---|---|
| LTR | ZONE | ECO | DESCRIPTION | DATE | APPROVED |
| A | | 63099 | SEE EIR | | |
| B | | 67884 | TYPE NO. WAS MDD-4154B - | | |
| C | | 67977 | SEE EIR | | |
| D | | 90417 | TYPE NO WAS MDD 4176A4 | | |
| H | | A91397 | SEE EIR. | | |

NOTE:

1. MANUFACTURING TO BE IN COMPLIANCE WITH THE FOLLOWING SPECIFICATIONS: (502) (ASSEMBLY), (503) (DIP SOLDERING) (504) (WORKMANSHIP).
2. FIND NUMBERS FOR PARTS IDENTIFIED BY REFERENCE DESIGNATION APPEAR IN LIST OF MATERIAL ONLY.
3. DARK END OF DIODE INDICATES CATHODE.
4. THIS AREA TO BE MASKED DURING DIP SOLDERING PROCESS. OPTION IF DIP SOLDERING OCCURS BEFORE CORES ARE STRUNG, MASKING TAPE MAY BE OMITTED.
5. SERIAL NUMBER TO BE STAMPED ON SOLDERED SIDE OF THE BOARD PER (501).
6. THE ASSEMBLY SHALL NOT CONTAIN CORES FROM MORE THAN ONE MANUFACTURER
7. THE TERMINATION OF ALL LINES SHALL BE SECURED TO THE APPROPRIATE PRINTED WIRING ON THE BOARD BY SOLDERING PER (503)
8. NO LINES SHALL BE SPLICED EXCEPT AT THE PRINTED WIRING.
9. THE SEALANT SHALL BE APPLIED BY SPRAYING FOUR COATS WHEN MIXED 1/3 (14) AND 2/3 (15), EACH COAT BEING SPRAYED FROM ALL DIRECTIONS BOTH SIDES OF THE PLANE THE COATING SHALL NOT FILL MORE THAN 100 OF THE AREAS BETWEEN THE CORES. THERE SHALL BE NO BLISTERS, NODULES, OR FOREIGN MATTER IN THE COATING THE COATING SHALL ADHERE TIGHTLY TO THE ASSEMBLY WHEREVER IT TOUCHES THE ASSEMBLY ( APPLY SEALANT APPROXIMATELY IN AREA INDICATED )
10. TERMINATIONS E1 THRU E18 ARE FOR REFERENCE ONLY AND DO NOT APPEAR ON THE FINISHED PART.
11. LEAD SPACING OF CR1 THRU CR70 ARE DECREASED TO .300
12. THE VINYL BACKING (17) SHALL BE APPLIED TO THE SOLDER SIDE OF THE BOARD (1) TO ADEQUATELY COVER THE CORE ARRAY WINDOW AREA. HEAT SHALL BE APPLIED ONLY TO THE PERIMETER OF THE VINYL (17) TO SECURE BONDING.
13. ALPHA-NUMERIC NUMBER TO BE STAMPED 3/16 HIGH PER (501).
14. ● INDICATES FEED-THRU HOLE.

FOR ACCEPTANCE TEST INFORMATION SEE DETACHED ACCEPTANCE TEST LIST
TL 4031703 ( 3 SH)

FOR MATERIAL REQUIREMENTS SEE DETACHED LIST OF MATERIAL
LM 4031703

REVISION LETTER IN LWR RH CORNER APPLIES TO PICTORIAL SHT 1S
LM REV LETTER CONTROLS DOCUMENT

| QTY REQD | FIND | REFDES | CODE IDENT | DWG SIZE | PART OR IDENTIFYING NO. | NOMENCLATURE OR DESCRIPTION |
|---|---|---|---|---|---|---|

LIST OF MATERIAL M

PART NO. 4031703 D
~~IDENT NO.~~

THIS DOCUMENT CONTAINS CONFIDENTIAL INFORMATION OF THE SPERRY RAND CORPORATION AND IS FURNISHED PURSUANT TO THE CONTRACT NO. ... DO NOT ...

ON THE UNDERSTANDING THAT IT IS ONLY SENT AND THE INFORMATION THEREIN IS NOT TO BE USED IN ANY MANNER DETRIMENTAL TO SPERRY RAND CORPORATION OR FOR THE PURPOSE OF MANUFACTURE OR SALE OF OTHER EQUIPMENT WITHOUT PERMISSION IN WRITING FROM THE SPERRY RAND CORPORATION.

| | |
|---|---|
| NEXT ASSY | 2305.00 |
| APPLICATION | EQUIPMENT |
| COMMODITY CODE | |

UNLESS OTHERWISE SPECIFIED
DIMENSION IN INCHES TOLERANCE ON 2 PLACE DECIMALS ± .03 3 PLACE DECIMALS ± .010 ANGLES ± 2°
HOLE DIAMETER TOLERANCE
0 THRU .200 + .003 − .000; .201 THRU .500 + .005 − .003; .501 & LARGER + .010 − .005
THREADS: EXT CL 2A INT CL 2B
MATERIAL
FINISH

| | | |
|---|---|---|
| LAYOUT | R. REICHOW | DATE Dec 63 |
| DRAFTSMAN | P. A. Barthell | 7-7-64 |
| CHECKER | D. O. Cutler | 7-22-64 |
| ENGINEER | K. C. Rueber | 7-22-64 |
| APPROVAL | | |

CLASS A

UNIVAC
DIVISION OF SPERRY RAND CORPORATION

TITLE
CORE ARRAY AND SENSE AMPLIFIERS, TYPE MDD416A6

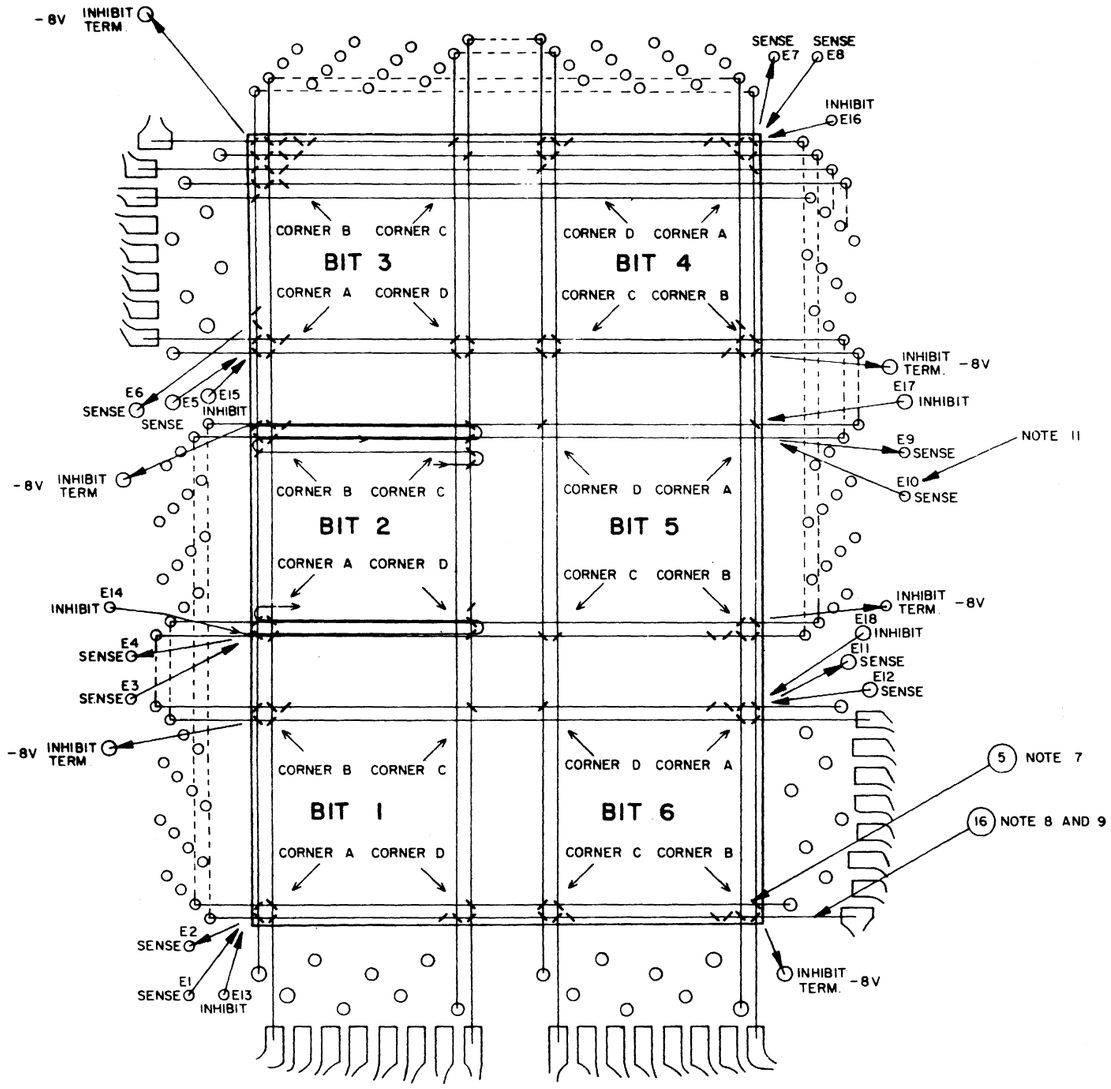
| CODE IDENT NO | SIZE | DWG NO. |
|---|---|---|
| | D | 4031703 |

SCALE 2/1 WEIGHT SHEET

DO NOT SCALE THIS PRINT

A C D H

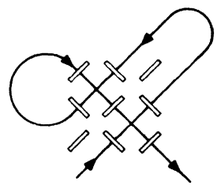
# MDD416A5



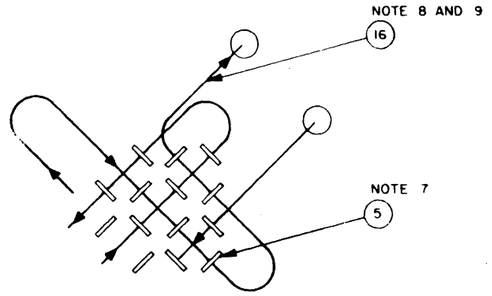

TYPICAL INHIBIT AND DRIVE LINE ROUTING

VIEWED FROM SOLDERED SIDE OF BOARD

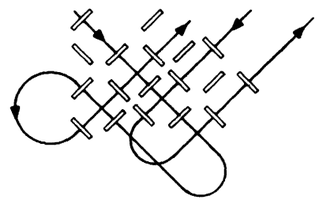
SCALE 4/1



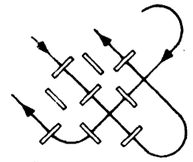
CORNER "D"
( 6 PLACES)




CORNER "A"
( 6 PLACES )



CORNER "C"
( 6 PLACES )



CORNER "B"
( 6 PLACES )

TYPICAL SENSE LINE ROUTING

VIEWED FROM SOLDERED SIDE OF BOARD

SCALE - NONE

| QTY REQD | REF DES | PART OR IDENTIFYING NO | NOMENCLATURE OR DESCRIPTION |
|---|---|---|---|

LIST OF MATERIAL

PART NO. 4031703-00
~~IDENT NO.~~

UNLESS OTHERWISE SPECIFIED: DIMENSION IN INCHES TOLERANCE ON 2 PLACE DECIMALS ± .01, 3 PLACE DECIMALS ± .005, ANGLES ± 1°; HOLE DIAMETER TOLERANCE: 0 THRU .250 ± .003, .251 THRU .500 ± .005, 501 & LARGER ± .010; .002 ± .003, .005; THREADS EXT CL 2A, INT CL 2B; MATERIAL; FINISH

NEXT ASSY | EQUIPMENT

APPLICATION

COMMODITY CODE

| | | DATE |
|---|---|---|
| LAYOUT | R. A. BARTHEL | 3-24-64 |
| DRAFTSMAN | R. A. Barthel | 4-5-64 |
| CHECKER | M. D. Cutts | 7-22-64 |
| ENGINEER | R. C. Benson | 5-26-64 |
| APPROVAL | | |

CLASS A

UNIVAC
DIVISION OF SPERRY RAND CORPORATION

TITLE
CORE ARRAY AND SENSE AMPLIFIERS, TYPE MDD416A5

CODE IDENT NO | SIZE D | DWG NO 4031703

SCALE 2/1 | WEIGHT | SHEET 2 OF

DO NOT SCALE THIS PRINT

THIS DOCUMENT CONTAINS CONFIDENTIAL INFORMATION OF THE UNIVAC DIVISION OF SPERRY RAND CORPORATION AND IS FURNISHED PURSUANT TO THE FOLLOWING INSTRUMENT
ON THE UNDERSTANDING THAT THIS DOCUMENT AND THE INFORMATION THEREON MAY NOT BE DEALT WITH IN ANY MANNER EXCEPT FOR THE PURPOSES OF THAT INSTRUMENT OR AS OTHERWISE PERMITTED IN WRITING BY THE UNIVAC DIVISION OF SPERRY RAND CORPORATION

| DETACHED LIST OF MATERIAL | | | TITLE OF DRAWING FROM WHICH DETACHED: CORE ARRAY SENSE AMPLIFIER | | | |
|---|---|---|---|---|---|---|
| ENG. PROJ. CODE: MM | UNIT OF MEASURE | DWG SIZE: D | ASSY - MDD 416 | LM | DWG. NO. 4031703 | REV. H |
| MFG. PROJ. CODE | L/M CLASS: A | DCL: A | UNIVAC (DIVISION OF SPERRY RAND CORPORATION) | LIST OF MATERIAL IDENTIFICATION | | ISSUE NO. 1 |
| | | | | CODE IDENT NO. 90536 | PIC. REV. | SHEET 1 |

LIST OF MATERIAL

| QTY. REQD. | MFG. QTY. | MFG. U/M | FIND | REFERENCE DES A | REFERENCE DES B | REFERENCE DES C | CODE IDENT | SIZE | IDENTIFICATION INFO PART OR IDENT NO. DWG. NO. | IDENTIFICATION INFO DASH | NOMENCLATURE OR DESCRIPTION | DCL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | 1 | - - - | - - - | - - - | | E | 4031702 | 02 | PT NO. 4031703 00 THRU 00 PRINTED CIRCUIT BOARD -- AMPLIFIER, TYPE MDD-416 | A |
| 70 | | | 2 | CR1 | THRU | CR70 | | A | 902571 | 00 | SEMICONDUCTOR DEVICE,DIODE-CRYSTAL,GERMANIUM,TYPE 1N270 | |
| 6 | | | 3 | C2 | THRU | C7 | | A | 908591 | 44 | CAPACITOR, FIXED, CERAMIC, 500 V, +-10%, 500 UUF | |
| 1 | | | 4 | C1 | | | | A | 4914564 | 00 | CAPACITOR, FIXED, CERAMIC, .01UF, 100V, -20+80% | A |
| 1536 | | | 5 | - - - | - - - | - - - | | A | 4914508 | 00 | CORE, FERRITE, TOROID COINCIDENT CURRENT MEMORY | A |
| 18 | | | 6 | Q1 | THRU | Q18 | | C | 911915 | 01 | TRANSISTOR -- PNP, GERMANIUM, SWITCHING | B |
| 6 | | | 7 | R2 | R9 | R16 | | C | 3010883 | 34 | RESISTOR, FIXED, | U |
| | | | R | R23 | R30 | R37 | 02 | | | | 1/2 WATT, +-2%, 270 OHMS | |
| 6 | | | 8 | R7 | R14 | R21 | | C | 3010883 | 48 | RESISTOR, FIXED, | U |
| | | | R | R28 | R35 | R42 | 02 | | | | 1/2 WATT, +-2%, 1000 OHMS | |
| 6 | | | 9 | R5 | R12 | R19 | | C | 3010883 | 64 | RESISTOR, FIXED, | U |
| | | | R | R26 | R33 | R40 | 02 | | | | 1/2 WATT, +-2%, 4700 OHMS | |
| 6 | | | 10 | R1 | R8 | P15 | | C | 3010883 | 72 | RESISTOR, FIXED, | U |
| | | | R | R22 | R29 | R36 | 02 | | | | 1/2 WATT, +-2%, 10000 OHMS | |
| 6 | | | 11 | R6 | R13 | R20 | | C | 3010983 | 78 | RESISTOR, FIXED, | U |
| | | | R | R27 | R34 | R41 | 02 | | | | 1/2 WATT, +-2%, 18000 OHMS | |
| 12 | | | 12 | R3 | R4 | R10 | | C | 3162267 | 26 | RESISTOR, FIXED, 1/2W, +-5% 33 OHMS | U |
| | | | R | R11 | R17 | R18 | 02 | | | | | |
| | | | R | R24 | R25 | R31 | 03 | | | | | |
| | | | R | R32 | R38 | R39 | 04 | | | | | |
| 6 | | | 13 | T1 | THRU | T6 | | D | 4031718 | 00 | TRANSFORMER, PULSE -- 1:1:5 | A |
| AR | | | 14 | - - - | - - - | - - - | | A | 4956699 | 00 | INSULATING LACQUER, ELECTRICAL | A |
| AR | | | 15 | - - - | - - - | - - - | | A | 4956699 | 01 | INSULATING LACQUER, ELECTRICAL | A |
| AR | | | 16 | - - - | - - - | - - - | | A | 4956127 | 20 | WIRE,ELECTRICAL--MAGNET, SOLDERABLE,ABRASION RESISTANT | |

FORM P 1648 V (REV. 6-64)

| DETACHED LIST OF MATERIAL | | | TITLE OF DRAWING FROM WHICH DETACHED: CORE ARRAY SENSE AMPLIFIER | | | |
|---|---|---|---|---|---|---|
| ENG. PROJ. CODE: MM | UNIT OF MEASURE | DWG SIZE: D | ASSY - MDD 416 | LM | DWG. NO. 4031703 | REV. H |
| MFG. PROJ. CODE | L/M CLASS: A | DCL: A | UNIVAC (DIVISION OF SPERRY RAND CORPORATION) | LIST OF MATERIAL IDENTIFICATION | | ISSUE NO. 1 |
| | | | | CODE IDENT NO. 90536 | PIC. REV. H | SHEET 2 |

LIST OF MATERIAL

| QTY. REQD. | MFG. QTY. | MFG. U/M | FIND | REFERENCE DES A | REFERENCE DES B | REFERENCE DES C | CODE IDENT | SIZE | IDENTIFICATION INFO PART OR IDENT NO. DWG. NO. | IDENTIFICATION INFO DASH | NOMENCLATURE OR DESCRIPTION | DCL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| AR | | | 17 | - - - | - - - | - - - | | D | 4008850 | 01 | INSULATOR SHEET ELECT-- RIGID VINYL,ADHESIVE COATED FILM | |
| | | | F01 | - - - | - - - | - - - | | D | 4031701 | 00 | CORE ARRAY & SENSE AMPLIFIERS, TYPE MDD 416, SCHEM OF | A |
| | | | S01 | - - - | - - - | - - - | | A | DS00273 | | MARKING FOR ELECTRONIC EQUIP, REQUIREMENTS FOR, PROCESS SPEC | A |
| | | | S02 | - - - | - - - | - - - | | A | DS00306 | | PRINTED CIRCUIT BOARD -- ASSY OF, PROCESS SPEC FOR | A |
| | | | S03 | - - - | - - - | - - - | | A | DS00304 | | SOLDERING OF PC BOARDS, SPEC FOR | A |
| | | | S04 | - - - | - - - | - - - | | A | DS07100 | | DESIGN AND WORKMANSHIP FOR THE 1107 COMPUTER, SPEC FOR | A |
| | | | Z01 | - - - | - - - | - - - | - - | | A 63699 | | L/M A PIC A EIR HISTORY | |
| | | | Z02 | - - - | - - - | - - - | - - | | A 67821 | | L/M B PIC B EIR HISTORY | |
| | | | Z03 | - - - | - - - | - - - | - - | | A 67877 | | L/M C PIC C EIR HISTORY | |
| | | | Z04 | - - - | - - - | - - - | - - | | A 40083 | 11 | L/M D PIC C EIR HISTORY | |
| | | | Z05 | - - - | - - - | - - - | - - | | A 80417 | | L/M E PIC D EIR HISTORY | |
| | | | Z06 | - - - | - - - | - - - | - - | | A 40092 | 2 | L/M F PIC D EIR HISTORY | |
| | | | Z07 | - - - | - - - | - - - | - - | | A 84004 | 39 | L/M G PIC D EIR HISTORY | |
| | | | Z08 | - - - | - - - | - - - | - - | | A 91397 | | L/M H PIC H EIR HISTORY | |

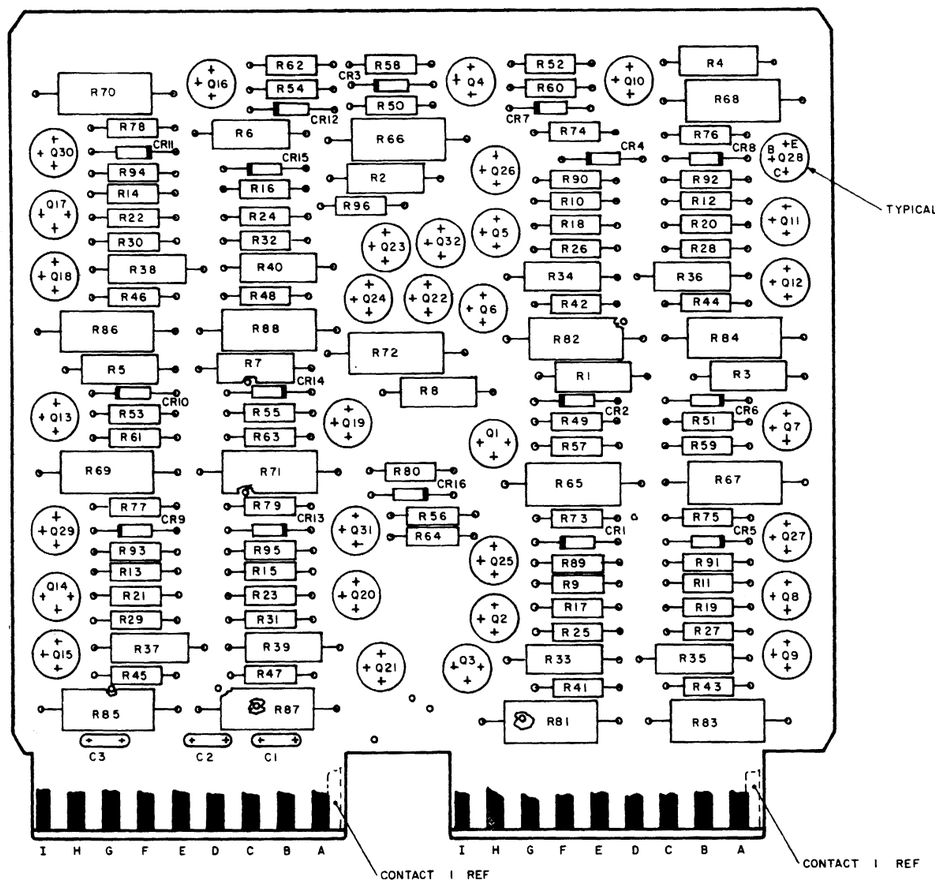
A. D. 7-22-64



FORM P 1648 V (REV. 6-64)

NOTE:
1. MANUFACTURING TO BE IN COMPLIANCE WITH THE FOLLOWING SPECIFICATIONS: (S01) (ASSEMBLY), (S02) (DIP SOLDERING), (S03) (WORKMANSHIP).
2. FIND NUMBERS FOR PARTS IDENTIFICATION BY REFERENCE DESIGNATION APPEAR IN LIST OF MATERIAL ONLY.
3. DARK END OF DIODE INDICATES CATHODE.

| REVISIONS | | | | | | |
|---|---|---|---|---|---|---|
| SYM | ZONE | EIR | DESCRIPTION | CHK | DATE | APPROVED |
| A | | 63699 | SEE EIR | | 12-4-64 | |




TYPICAL LEAD DESIGNATION

FOR ACCEPTANCE TEST INFORMATION SEE DETACHED ACCEPTANCE TEST LIST
TL 4031707 ( 3 SH.)

FOR MATERIAL REQUIREMENTS SEE DETACHED LIST OF MATERIAL
LM 4031707

REVISION LETTER IN LWR RH CORNER APPLIES TO PICTORIAL SHT (S)
LM REV LETTER CONTROLS DOCUMENT

| QTY REQD | FIND | REF DES | CODE IDENT | DWG SIZE | PART OR IDENTIFYING NO | NOMENCLATURE OR DESCRIPTION |
|---|---|---|---|---|---|---|

LIST OF MATERIAL M

PART NO. 4031707-00
~~IDENT NO.~~

THIS DOCUMENT CONTAINS CONFIDENTIAL INFORMATION OF THE UNIVAC DIVISION OF SPERRY RAND CORPORATION AND IS FURNISHED PURSUANT TO THE FOLLOWING INSTRUMENT:

ON THE UNDERSTANDING THAT THIS DOCUMENT AND THE INFORMATION THEREON MAY NOT BE DEALT WITH IN ANY MANNER EXCEPT FOR THE PURPOSES OF THAT INSTRUMENT OR AS OTHERWISE PERMITTED IN WRITING BY THE UNIVAC DIVISION OF SPERRY RAND CORPORATION.

| | |
|---|---|
| NEXT ASSY | EQUIPMENT |
| APPLICATION | |
| COMMODITY CODE | |

UNLESS OTHERWISE SPECIFIED
DIMENSION IN INCHES TOLERANCE ON 2 PLACE DECIMALS ± | 3 PLACE DECIMALS ± | ANGLES ±
HOLE DIAMETER TOLERANCE
0 THRU .250 + .003 − .002 | 251 THRU .500 + .005 − .003 | 501 & LARGER + .010 − .005
THREADS EXT CL 2A, INT CL 2B
MATERIAL
FINISH

| | | |
|---|---|---|
| LAYOUT | H. J. NEISEN | 2-6-63 |
| DRAFTSMAN | K. Patrick | 12-2-64 |
| CHECKER | [illegible] | [illegible] |
| ENGINEER | [illegible] | [illegible] |
| APPROVAL | [illegible] | [illegible] |

CLASS A
UNIVAC
DIVISION OF SPERRY RAND CORPORATION

TITLE
BI-DIRECTIONAL SWITCH ASSY, TYPE MDD 417A2

| CODE IDENT NO | SIZE | DWG NO. |
|---|---|---|
| | D | 4031707 |

SCALE 2/1 WEIGHT SHEET 1 OF 1

DO NOT SCALE THIS PRINT

4031707 B

UDI-68111-1461

DETACHED LIST OF MATERIAL

BI-DIRECTIONAL SWITCH ASSY.

LM 4031707 B *

ENG PROJ CODE 09 | UNIT OF MEASURE | DWG SIZE D | TYPE MDD 417 | ISSUE NO 1

MFG PROJ CODE | U/M CLASS A | DCL C | UNIVAC | PIC REV A | SHEET 1

JULY 23,68

| QTY REQD | MFG QTY | MFG U/M | FIND NO | REFERENCE DES A | REFERENCE DES B | REFERENCE DES C | CODE IDENT | S I Z E | IDENTIFICATION INFO PART OR IDENT NO DWG NO | IDENTIFICATION INFO DASH | NOMENCLATURE OR DESCRIPTION | D C L |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | - 4 | | | | | | | | | |
| 1 | | | 1 | - - - | - - - | - - - - - | E | | 4031706 | 00 | PT NO. 4031707 00 THRU 00 | |
| | | | | | | | | | | | P.C. BOARD --BI-DIRECTIONAL SWITCH: MDC 417A2 | A |
| 3 | | | 2 | C1 | C2 | C3 | A | | 4914564 | 00 | CAPACITOR: FXD CERAMIC-.01 UF 3/8 LEAD LG: 100 VDC +80-20% | A * |
| 16 | | | 3 | CR1 | THRU | CR16 | C | | 4907929 | 00 | SEMICONDUCTOR DEVICE: DIODE GERMANIUM SWITCHING | H |
| 24 | | | 4 | Q1 | THRU | Q24 | A | | 4914118 | 00 | TRANSISTOR - PNP: GERMANIUM: SWITCHING | A |
| 8 | | | 5 | Q25 | THRU | Q32 | C | | 4907977 | 00 | TRANSISTOR: NPN: GERMANIUM: SWITCHING | A |
| 8 | | | 6 | R1 | THRU | R8 | C | | 3010885 | 60 | RESISTOR FIXED FILM 3300 OHMS: 1 WATT: +-2% | H |
| 16 | | | 7 | R9 | THRU | R16 | C | | 3010883 | 46 | RESISTOR FXD FILM - | H |
| | | | R | R41 | THRU | R48 | 02 | | | | 820 OHMS 1/2WATT +- 2% | |
| 8 | | | 8 | R17 | THRU | R24 | C | | 3010883 | 74 | RESISTOR FXD FILM - 12000 OHMS 1/2WATT +- 2% | H |

FORM =A 1648 V (REV 6 63)

DETACHED LIST OF MATERIAL

BI-DIRECTIONAL SWITCH ASSY.

LM 4031707 B *

ENG PROJ CODE 09 | UNIT OF MEASURE | DWG SIZE D | TYPE MDD 417 | ISSUE NO 1

MFG PROJ CODE | U/M CLASS A | DCL C | UNIVAC | PIC REV A | SHEET 3

JULY 23,68

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | F01 | - - - | - - - | - - - - - | D | | 4031705 | 00 | BI-DIRECTIONAL SWITCH -- MDD 417: SCHEM OF | A |
| | | | S01 | - - - | - - - | - - - - - | | | DS00306 | | PRINTED CIRCUIT BOARD- ASSY OF | A |
| | | | S02 | - - - | - - - | - - - - - | | | DS00304 | | SOLDERING OF PRTD CKT BOARDS | H |
| | | | S03 | - - - | - - - | - - - - - | | | DS07100 | | DESIGN AND WORKMANSHIP FOR THE 1107 COMPUTER | A |
| | | | Z01 | - - - | - - - | - - - - - | | | A 63699 | | L/M A PIC A REV HISTORY | |
| | | | Z02 | - - - | - - - | - - - - - | | | H 19953 | 11 | L/M B PIC A REV HISTORY | * |

M. Hanley

SHEET 3 OF 3

FORM =A 1648 V (REV 6 63)

DETACHED LIST OF MATERIAL

TITLE OF DRAWING FROM WHICH DETACHED: BI-DIRECTIONAL SWITCH ASSY.

LM | DWG NO 4031707 | REV B *

ENG PROJ CODE 09 | UNIT OF MEASURE | DWG SIZE D | TYPE MDD 417 | LIST OF MATERIAL IDENTIFICATION | ISSUE NO 1

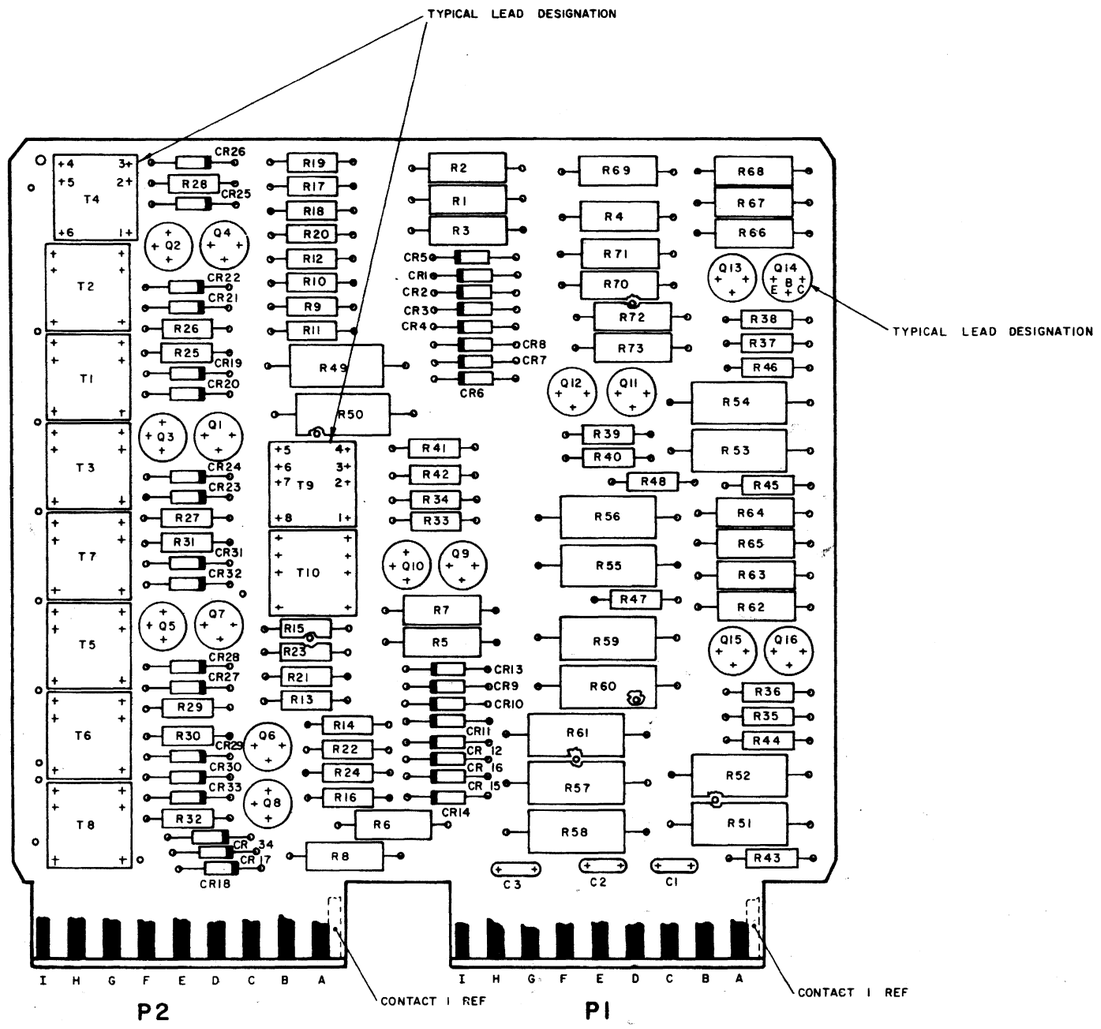
MFG PROJ CODE | U/M CLASS A | DCL C | UNIVAC | CODE IDENT NO | PIC REV A | SHEET 2

JULY 23,68 LIST OF MATERIAL

| QTY REQD | MFG QTY | MFG U/M | FIND NO | REFERENCE DES A | REFERENCE DES B | REFERENCE DES C | CODE IDENT | S I Z E | IDENTIFICATION INFO PART OR IDENT NO DWG NO | IDENTIFICATION INFO DASH | NOMENCLATURE OR DESCRIPTION | D C L |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 8 | | | 9 | R25 | THRU | R32 | C | | 3010883 | 28 | RESISTOR FXD FILM - 150 OHMS 1/2WATT +- 2% | H |
| 8 | | | 10 | R33 | THRU | R40 | C | | 3010885 | 50 | RESISTOR FIXED FILM 1200 OHMS: 1 WATT: +-2% | H |
| 8 | | | 11 | R49 | THRU | R56 | C | | 3010883 | 48 | RESISTOR FXD FILM - 1000 OHMS 1/2WATT +- 2% | H |
| 8 | | | 12 | R57 | THRU | R64 | C | | 3010883 | 76 | RESISTOR FXD FILM - 15000 OHMS 1/2WATT +- 2% | H |
| 8 | | | 13 | R65 | THRU | R72 | C | | 3010887 | 46 | RESISTOR FXD FILM - 820 OHMS 2WATT +- 2% | H |
| 8 | | | 14 | R73 | THRU | R80 | C | | 3010883 | 33 | RESISTOR FXD FILM - 240 OHMS 1/2WATT +- 2% | H |
| 8 | | | 15 | R81 | THRU | R88 | C | | 3010887 | 47 | RESISTOR FXD FILM - 910 OHMS 2WATT +- 2% | H |
| 8 | | | 16 | R89 | THRU | R96 | C | | 3010883 | 55 | RESISTOR FXD FILM - 2000 OHMS 1/2WATT +- 2% | H |

NOTE:
1. MANUFACTURING TO BE IN COMPLIANCE WITH THE FOLLOWING SPECIFICATIONS: (501) (ASSEMBLY), (502) (DIP SOLDERING), (503) (WORKMANSHIP).
2. FIND NUMBERS FOR PARTS IDENTIFIED BY REFERENCE DESIGNATION APPEAR IN LIST OF MATERIAL ONLY.
3. DARK END OF DIODE INDICATES CATHODE.

| REVISIONS | | | | | |
|---|---|---|---|---|---|
| SYM | ZONE | ECR | DESCRIPTION | DATE | APPROVED |
| A | | 63698 | SEE EJR | 12-4-64 | T.E.L. |




FOR ACCEPTANCE TEST INFORMATION SEE DETACHED ACCEPTANCE TEST LIST
TL 4031710 ( 5 SH)

FOR MATERIAL REQUIREMENTS SEE DETACHED LIST OF MATERIAL
LM 4031710

REVISION LETTER IN LWR RH CORNER APPLIES TO PICTORIAL SHT (S)
LM REV LETTER CONTROLS DOCUMENT

| QTY REQD | FIND | REF DES | CODE IDENT | DWG SIZE | PART OR IDENTIFYING NO. | NOMENCLATURE OR DESCRIPTION |
|---|---|---|---|---|---|---|

LIST OF MATERIAL M

PART NO. 4031710-00
~~IDENT NO.~~

THIS DOCUMENT CONTAINS CONFIDENTIAL INFORMATION OF THE UNIVAC DIVISION OF SPERRY RAND CORPORATION AND IS FURNISHED PURSUANT TO THE FOLLOWING INSTRUMENT

ON THE UNDERSTANDING THAT THIS DOCUMENT AND THE INFORMATION THEREON MAY NOT BE DEALT WITH IN ANY MANNER EXCEPT FOR THE PURPOSES OF THAT INSTRUMENT OR AS OTHERWISE PERMITTED IN WRITING BY THE UNIVAC DIVISION OF SPERRY RAND CORPORATION

UNLESS OTHERWISE SPECIFIED
DIMENSION IN INCHES TOLERANCE ON 2 PLACE DECIMALS ± | 3 PLACE DECIMALS ± | ANGLES ±
HOLE DIAMETER TOLERANCE
0 THRU 250 − .003 − .002 | 251 THRU 500 + .005 − .003 | 501 & LARGER + .010 − .005
THREADS EXT CL 2A, INT CL 2B
MATERIAL
FINISH
NEXT ASSY | EQUIPMENT
APPLICATION
COMMODITY CODE

LAYOUT H. J. NEISEN 2-12-64
DRAFTSMAN K. Torkick 12-2-64
CHECKER J-E Erickson 2-3-64
ENGINEER R C Kaier 12/14/64
APPROVAL

CLASS A
UNIVAC
DIVISION OF SPERRY RAND CORPORATION

TITLE
READ-WRITE INHIBIT AND LINE SWITCH, TYPE MDD 418 DI

CODE IDENT NO. | SIZE D | DWG NO. 4031710
SCALE 2/1 | WEIGHT | SHEET 1 OF 1

DO NOT SCALE THIS PRINT

4031710 REV. (SH.)
UDI-1491111-(02)

**DETACHED LIST OF MATERIAL**

TITLE OF DRAWING FROM WHICH DETACHED: READ-WRITE INHIBIT & LINE SWITCH ASSY, TYPE MOD 418

UNIVAC

LM — DWG. NO. 4031710 — REV. A

ENG. PROJ. CODE MM | UNIT OF MEASURE | DWG SIZE E

MFG. PROJ. CODE | L/M CLASS A | DCL A

LIST OF MATERIAL IDENTIFICATION | ISSUE NO. M

CODE IDENT NO. 90536 | PIC. REV A | SHEET 1

LIST OF MATERIAL

| QTY. REQD. | MFG. QTY. | MFG. U/M | FIND | REFERENCE DES A | REFERENCE DES B | REFERENCE DES C | CODE IDENT | SIZE | IDENTIFICATION INFO PART OR IDENT NO. DWG. NO. | IDENTIFICATION INFO PART OR IDENT NO. DASH | NOMENCLATURE OR DESCRIPTION | DCL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | - 4 | | | | | | | | PT NO. 4031710 03 THRU 00 | |
| 1 | | | 1 | - - - | - - - | - - - | - - | E | 4031709 | 00 | P.C. BOARD--READ-WRITE INHIBIT AND LINE SWITCH MOD 418D1 | A |
| 18 | | | 2 | CR19 | THRU | CR36 | | A | 902971 | 00 | SEMICONDUCTOR DEVICE:DIODE-CRYSTAL:GERMANIUM:TYPE 1N270 | |
| 3 | | | 3 | C1 | C2 | C3 | | A | 909926 | 01 | CAPACITOR:FIXED:CERAMIC 100 V: +60-20%: .01 UF | |
| 18 | | | 4 | CR1 | THRU | CR18 | | C | 4907929 | 00 | SEMICONDUCTOR DEVICE:DIODE--GERMANIUM SWITCHING | |
| 8 | | | 5 | R1 | THRU | R8 | | C | 3010865 | 98 | RESISTOR: FIXED: FILM 1 WATT: +- 2%: 2700 OHMS | A |
| 8 | | | 6 | R9 | THRU | R16 | | A | 3010883 | 36 | RESISTOR: FIXED: FILM 1/2 WATT: +-2%: 330 OHMS | |
| 8 | | | 7 | R17 | THRU | R24 | | A | 3010883 | 64 | RESISTOR: FIXED: FILM 1/2 WATT: +-2%: 4700 OHMS | |
| 8 | | | 8 | R25 | THRU | R32 | | A | 3010883 | 90 | RESISTOR: FIXED: FILM 1/2 WATT: +-2%: 1200 OHMS | |

FORM 64 1648 V (REV. 8-64)

**DETACHED LIST OF MATERIAL**

TITLE OF DRAWING FROM WHICH DETACHED: READ-WRITE INHIBIT & LINE SWITCH ASSY, TYPE MOD 418

UNIVAC

LM — DWG. NO. 4031710 — REV. A

ENG. PROJ. CODE MM | UNIT OF MEASURE | DWG SIZE E

MFG. PROJ. CODE | L/M CLASS A | DCL A

LIST OF MATERIAL IDENTIFICATION | ISSUE NO. L

CODE IDENT NO. 90536 | PIC. REV A | SHEET 2

LIST OF MATERIAL

| QTY. REQD. | MFG. QTY. | MFG. U/M | FIND | REFERENCE DES A | REFERENCE DES B | REFERENCE DES C | CODE IDENT | SIZE | IDENTIFICATION INFO PART OR IDENT NO. DWG. NO. | IDENTIFICATION INFO PART OR IDENT NO. DASH | NOMENCLATURE OR DESCRIPTION | DCL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 8 | | | 9 | R33 | THRU | R40 | | A | 3010883 | 56 | RESISTOR: FIXED: FILM 1/2 WATT: +-2%: 2200 OHMS | |
| 8 | | | 10 | R41 | THRU | R48 | | A | 3010883 | 28 | RESISTOR: FIXED: FILM 1/2 WATT: +-2%: 150 OHMS | |
| 8 | | | 11 | R49 | THRU | R56 | | A | 3010887 | 47 | RESISTOR: FIXED -- +-2%: 2W: 910 OHMS | A |
| 2 | | | 12 | R57 | R58 | | | A | 3010887 | 34 | RESISTOR: FIXED -- +-2%: 2W: 270 OHMS | A |
| 2 | | | 13 | R59 | R60 | | | A | 3010887 | 38 | RESISTOR: FIXED -- +-2%: 2W: 390 OHMS | A |
| 12 | | | 14 | R62 | THRU | R73 | | C | 3010885 | 19 | RESISTOR: FIXED: FILM 1 WATT: +- 2%: 62 OHMS | A |
| 18 | | | 15 | Q1 | THRU | Q18 | | | 4914118 | 00 | TRANSISTOR--PNP: GERMANIUM SWITCHING | |
| 8 | | | 16 | T1 | THRU | T8 | | D | 4031717 | 00 | TRANSFORMER: PULSE -- 21281 | A |
| 2 | | | 17 | T9 | T10 | | | D | 4031716 | 00 | TRANSFORMER: PULSE -- 1111293 | A |
| 1 | | | 18 | R61 | | | | A | 3010887 | 36 | RESISTOR: FIXED -- +-2%: 2W: 330 OHMS | A |

FORM 64 1648 V (REV. 8-64)

**DETACHED LIST OF MATERIAL**

TITLE OF DRAWING FROM WHICH DETACHED: READ-WRITE INHIBIT & LINE SWITCH ASSY, TYPE MOD 418

UNIVAC

LM — DWG. NO. 4031710 — REV. A

ENG. PROJ. CODE MM | UNIT OF MEASURE | DWG SIZE E

MFG. PROJ. CODE | L/M CLASS A | DCL A

LIST OF MATERIAL IDENTIFICATION | ISSUE NO. L

CODE IDENT NO. 90536 | PIC. REV A | SHEET 3

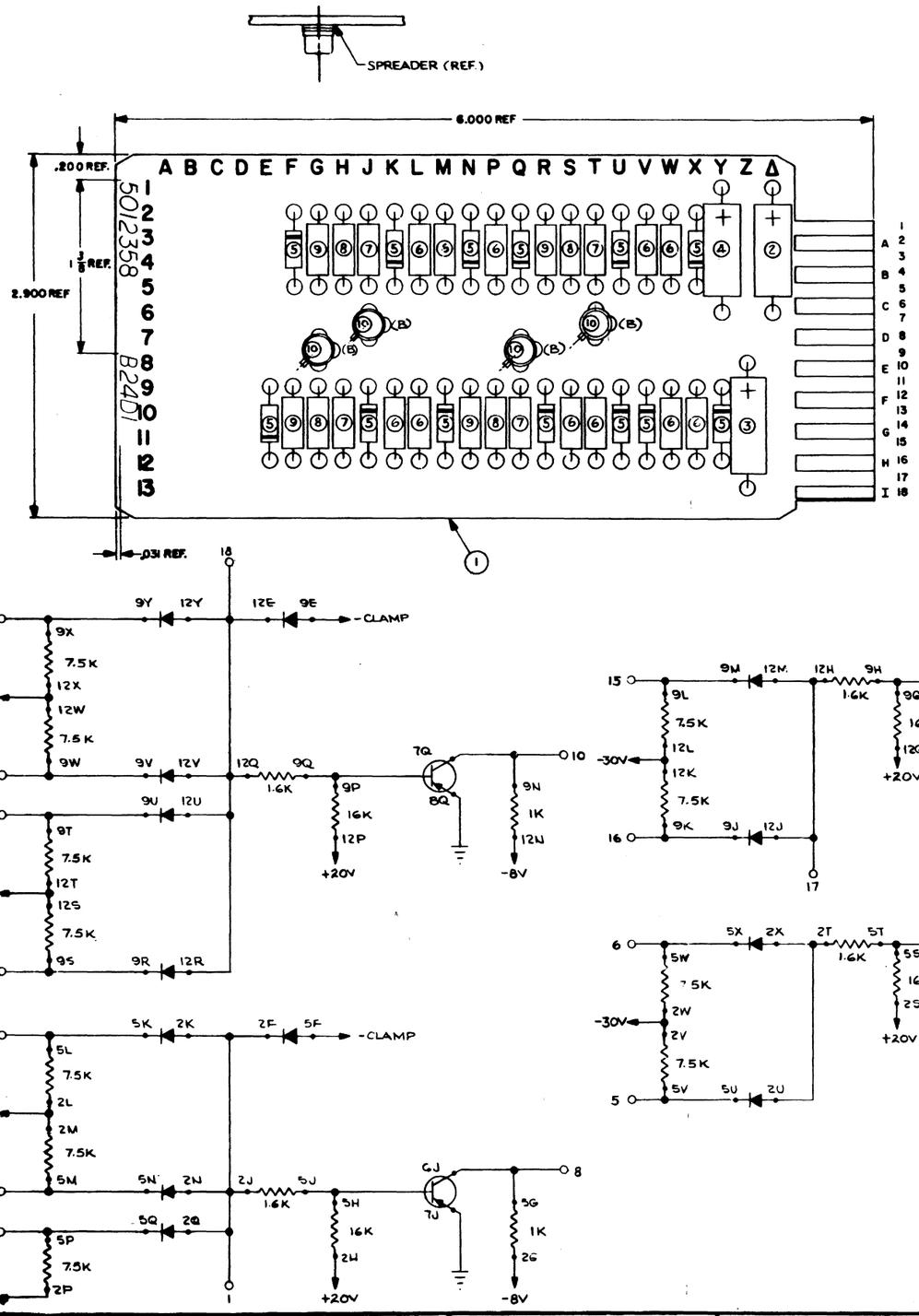
LIST OF MATERIAL

| QTY. REQD. | MFG. QTY. | MFG. U/M | FIND | REFERENCE DES A | REFERENCE DES B | REFERENCE DES C | CODE IDENT | SIZE | IDENTIFICATION INFO PART OR IDENT NO. DWG. NO. | IDENTIFICATION INFO PART OR IDENT NO. DASH | NOMENCLATURE OR DESCRIPTION | DCL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | F01 | - - - | - - - | - - - | - - | D | 4031708 | 00 | READ-WRITE INHIBIT AND LINE SWITCH MOD 418D1 SCHEM DF | A |
| | | | S01 | - - - | - - - | - - - | - - | D5 | 306 | | SPECIFICATION DRAWING | |
| | | | S02 | - - - | - - - | - - - | - - | D5 | 304 | | SPECIFICATION DRAWING | |
| | | | S03 | - - - | - - - | - - - | - - | G5 | 710J | | SPECIFICATION DRAWING | |
| | | | Z01 | - - - | - - - | - - - | - - | | A 63699 | | L/M A PIC A REV HISTORY | |

J. H. Anderson 12-9-64

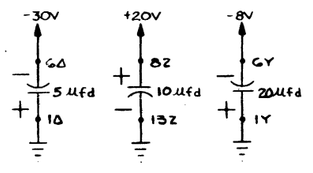
FORM 64 1648 V (REV. 8-64)

SHEET 3 OF 3

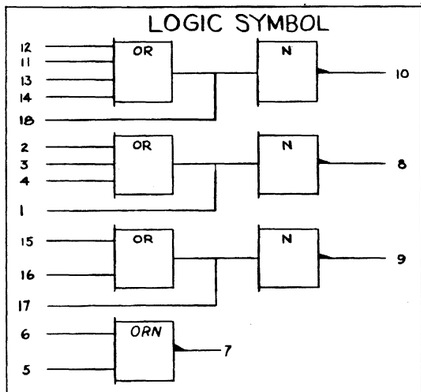



NOTES:

1) STRIPE ON DIODE BODY DENOTES CATHODE END.
   ◯ INDICATES FIND NO.
   <> INDICATES DESIGNATIONS STAMPED ON COMPONENT FOR REF ONLY.
   ( ) INDICATES DESIGNATIONS FOR REF. ONLY & SHALL NOT BE STAMPED.
2) UNLESS OTHERWISE DESIGNATED
   - CONTACT A SHALL BE ⏚
   - CONTACT B SHALL BE SPARE
   - CONTACT C SHALL BE → -8V
   - CONTACTS D & E SHALL BE → -30V
   - CONTACT F SHALL BE → -CLAMP
   - CONTACT G SHALL BE → +20V
   - CONTACT H SHALL BE SPARE
   - CONTACT I SHALL BE ⏚
3) MINIMUM SPACE FOR THIS BOARD IS 1/2.
4) ASSEMBLE PER D51IC
5) COMPONENTS AT 2X & 10Y TO BE INSERTED PRIOR TO COMPONENTS AT 1Y & 8Z RESPECTIVELY.
6) AXIAL LEAD COMPONENTS, EXCEPT DIODES, TO BE MOUNTED .010 MIN FROM THE BOARD.
7) TEST PER CS1985 & 5014308




LOGIC SYMBOL




| REVISIONS | | | | | |
|---|---|---|---|---|---|
| SYM | ZONE | ECR | DESCRIPTION | DIR | DATE | APPROVED |
| F | – | C1017-1 | RELEASED | | 7-7-62 | DT |
| G | | 01382-1 | ADDED NOTE 7 | | 2-22-63 | DT |

| QTY REQD | FIND | REF DES | CODE IDENT | CHNG LTR | PART OR IDENTIFYING NO. | NOMENCLATURE OR DESCRIPTION |
|---|---|---|---|---|---|---|
| 4 | 10 | 7G, 6J 7Q, 6T | | | 4908000-01 | TRANSISTOR |
| 4 | 9 | 9F, 2G 9N, 2R | | | 3010691-48 | RESISTOR 1K 1/2W ±5% |
| 4 | 8 | 9G, 2H 9P, 2S | | | 3010883-77 | RESISTOR 16K 1/2W ±2% |
| 4 | 7 | 9H, 2J 9Q, 2T | | | 3010883-53 | RESISTOR 1.6K 1/2W ±2% |
| 11 | 6 | 9K, 2L 9L, 2M 2P, 9S 9T, 2V 2W, 9W 9X | | | 3010883-69 | RESISTOR 7.5K 1/2W ±2% |
| 13 | 5 | 9E, F2 9J, 2K 9M, 2N 2Q, 9R 2U, 9U 9V, 2X 2Y | | | 3010810 | DIODE EM120 |
| 1 | 4 | 1Y | | | 2012127-09 | CAPACITOR 20 μfd 15V +10% -10% |
| 1 | 3 | 8Z | | | 2012128-07 | CAPACITOR 10 μfd 25V +100% -10% |
| 1 | 2 | 1A | | | 2012129-04 | CAPACITOR 5 μfd 50V ±10% |
| 1 | 1 | | | | 5012357-00 | BOARD PRINTED WIRING |

LIST OF MATERIAL

| DO | 5012348-00 | TYPE 2011 |
|---|---|---|
| DO | 5012347-00 | TYPE 2009 |
| CC | 5012346-00 | TYPE 2010 |
| PT | NEXT ASSY | EQUIPMENT |
| | APPLICATION | |

UNLESS OTHERWISE SPECIFIED
ALL DIMENSIONS IN INCHES
TOLERANCE ON FRACTIONS ±, DECIMALS ±, ANGLES ±
DECIMAL HOLE DIAMETER TOLERANCE: 0 THRU 250 ±.003 ±.002; 251 THRU 500 ±.005 ±.003; 501 & LARGER ±.010 ±.005
THREADS EXT CL 2A, INT CL 2B
MATERIAL
FINISH

| | | |
|---|---|---|
| LAYOUT | W.K. YOUNG | 1-17-62 |
| DRAFTSMAN | MIKE MARINKO | 1-23-62 |
| CHECKER | | 2-22-62 |
| ENGINEER PROD | R. TODD R. Todd | 8/28/62 |
| APPROVAL | | 9/10/62 |
| CCT. DES. | J. GLUSICA | |

CLASS A

Remington Rand Univac
DIVISION OF SPERRY RAND CORPORATION

TITLE
NEGATIVE INPUT AMPLIFIER ASSEMBLY TYPE B24D1

CODE IDENT NO. | SIZE D | DWG NO. 5012358

SCALE 8/1 | SHEET OF

BT 432 C | DO NOT SCALE THIS PRINT | F6

DWG NO 5012358 B

THIS DOCUMENT CONTAINS CONFIDENTIAL INFORMATION OF THE REMINGTON RAND DIVISION OF SPERRY RAND CORPORATION AND IS FURNISHED PURSUANT TO THE FOLLOWING INSTRUMENT.
ON THE UNDERSTANDING THAT THIS DOCUMENT AND THE INFORMATION THEREON MAY NOT BE DEALT WITH IN ANY MANNER EXCEPT FOR THE PURPOSES OF THAT INSTRUMENT OR AS OTHERWISE PERMITTED IN WRITING BY THE REMINGTON RAND DIVISION OF SPERRY RAND CORPORATION.

DETACHED LIST OF MATERIAL

NEGATIVE INPUT AMPLIFIER ASSY

TYPE B2401

UNIVAC

OCT. 22/66

LM 5012358 H

1 1

PT NO. 5012358 00 THRU 00

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | 10 | | | | D | | | | |
| | | | | | C | | | | |
| 1 | 1 | | | | C | 5012357 | 00 | PRINTED WIRING BOARD MDLE | C |
| | | | | | | | | LOCATION B24 | |
| 1 | 2 | (IDELT A) | | | C | 2012129 | 04 | CAPACITOR FXD ELECT AL 50V DC | H |
| | | | | | | | | 5 UF -10% +100% | |
| 1 | 3 | 8Z | | | C | 2012129 | 07 | CAPACITOR FXD ELECT AL 25V DC | H |
| | | | | | | | | 10 UF -10% +100% | |
| 1 | 4 | 1Y | | | C | 2012127 | 09 | CAPACITOR FXD ELECT. AL 15V DC | H |
| | | | | | | | | 20 UF -10% +100% | |
| 19 | 5 | 9E | F2 | 9J | C | 3010810 | 00 | SEMICONDUCTOR DEVICE | H |
| | | | | | | | | DIODE GERMANIUM EM 120 | |
| | | R 2K | 9H | 2N | | | 02 | | |
| | | R 2Q | 9R | 2U | | | 03 | | |
| | | R 9J | 9V | 2X | | | 04 | | |
| | | R 9Y | | | | | 05 | | |
| 11 | 6 | 9K | 2L | 9L | C | 3010883 | 69 | RESISTOR FXD FILM - | H |
| | | | | | | | | 7500 OHMS 1/2WATT +- 2% | |
| | | R 2M | 2P | 9S | | | 02 | | |
| | | R 9T | 2V | 2W | | | 03 | | |
| | | R 9W | 9X | | | | 04 | | |

DETACHED LIST OF MATERIAL

NEGAYIVE INPUT AMPLIFIER ASSY

TYPE B2401

UNIVAC

OCT. 22/66

LM 5012358 H

ISSUE NO 1

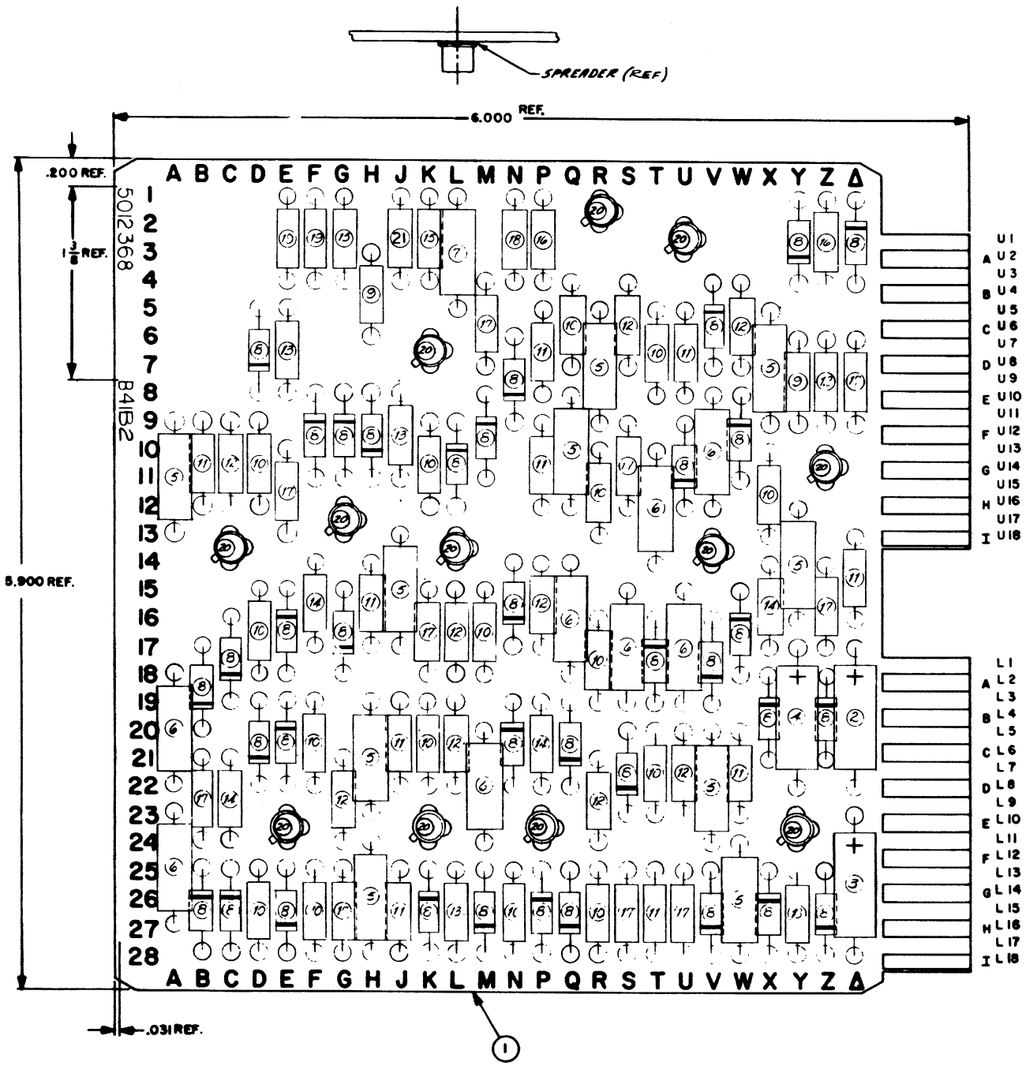
PC NO. 6 SHEET 2

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | 10 | | | | D | | | | |
| | | A | | | C | | | | |
| 4 | 7 | 9H | 2J | 9Q | C | 3010883 | 53 | RESISTOR FXD FILM - | H |
| | | R 2T | | | | | 02 | 1600 OHMS 1/2WATT +- 2% | |
| 4 | 8 | 9G | 2H | 9M | C | 3010683 | 77 | RESISTOR FXD FILM - | H |
| | | R 2S | | | | | 02 | 16000 OHMS 1/2WATT +- 2% | |
| 4 | 9 | 9F | 2G | 9N | C | 3010883 | 48 | RESISTOR FXD FILM - | H |
| | | R 2R | | | | | 02 | 1000 OHMS 1/2WATT +- 2% | |
| 4 | 10 | 7G | 6J | 7Q | C | 4908000 | 01 | TRANSISTOR PNP GERMANIUM | H |
| | | R 6T | | | | | 02 | HAS LEAD SPREADER | |
| | R01 | | | | D | 5014308 | 00 | CIRCUIT PACKAGE TEST SHEET | C |
| | | | | | | | | TYPE B24 | |
| | S01 | | | | | DS00410 | | PRINTED CKT SPEC FOR ASSY OF | H |
| | S02 | | | | A | CS01985 | 00 | GENERAL 1004 TEST SPEC | C |
| | Z01 | | | | | C 1382 | 01 | L/M PIC G REV HISTORY | |
| | Z02 | | | | | C 6565 | 12 | L/M G PIC G REV HISTORY | |
| | Z03 | | | | | H 18062 | 04 | L/M H PIC G REV HISTORY | |

M. Hartley

FORM B A 1668 V (REV 6/65)

SHEET 2 OF 2




NOTES:

0) STRIPE ON DIODE BODY DENOTES CATHODE END.
○ INDICATES FIND NO.
<> INDICATES DESIGNATIONS STAMPED ON COMPONENT FOR REF. ONLY.
( ) INDICATES DESIGNATIONS FOR REF. ONLY & SHALL NOT BE STAMPED.

2) UNLESS OTHERWISE DESIGNATED

| | | | |
|---|---|---|---|
| CONTACT | A | SHALL BE | ⏚ |
| CONTACT | B | SHALL BE | SPARE |
| CONTACT | C | SHALL BE → | -8V |
| CONTACTS | D & E | SHALL BE → | -30V |
| CONTACT | F | SHALL BE → | -20V |
| CONTACT | G | SHALL BE → | +20V |
| CONTACT | H | SHALL BE | SPARE |
| CONTACT | I | SHALL BE | ⏚ |

3) MINIMUM SPACE FOR THIS BOARD IS 1/2 INCH.
4) ASSEMBLE PER DS 410.
5) CAPACITOR, FIND NUMBERS 2-7, SHALL BE INSERTED AFTER ADJACENT COMPONENTS.
6. AXIAL LEAD COMPONENTS, EXCEPT DIODES, TO BE MOUNTED .010 MIN. FROM THE BOARD.
7) TEST PER CS 1985 & 5014312

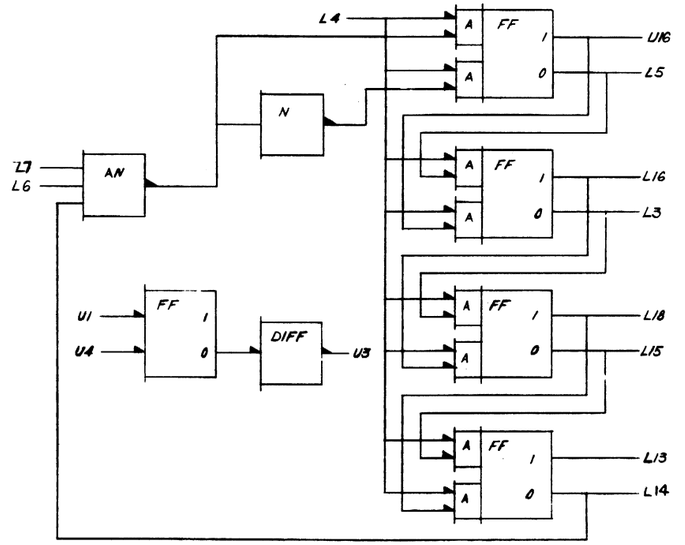
| REVISIONS | | | | | |
|---|---|---|---|---|---|
| SYM | ZONE | E.W. | DESCRIPTION | DATE | APPROVED |
| D | | C3817-1 | RELEASED | 6/7/63 | |
| E | | C3818-1 | SEE SHEET 2 | 10-1-63 | |
| F | C-4 | C3882-2 | ADD NOTE "7" | 4/1/64 | |
| G | | C3992-1 | SEE E.W. | 5/26/64 | |

L/M CONTINUED ON SHEET 2

| QTY REQD | FIND | REF DES | CODE IDENT | DWG SIZE | PART OR IDENTIFYING NO. | NOMENCLATURE OR DESCRIPTION |
|---|---|---|---|---|---|---|
| 2 | 16 | 1P, 12 | | | 3010691-66 | RESISTOR 3.6K ⅛W ±5% |
| 2 | 15 | 1G, 1K | | | 3010883-69 | 4.7K ±2% |
| 4 | 14 | 14F, 14X, 19P, 21C | | | 3010691-60 | 3.3K ±5% |
| 4 | 13 | 5E, 8J, 25J, 25Y | | | 3010883-60 | 3.3K ±2% |
| 10 | 12 | 4S, 4W, 6Z, 9C, 14P, 15L, 19L, 20U, 21G, 21R | | | 3010883-82 | 27K ±2% |
| 10 | 11 | 5P, 5U, 9B, 9P, 13A, 14H, 19J, 20M, 25J, 25T | | | 3010883-52 | 1.5K ±2% |
| 16 | 10 | 4Q, 5T, 9D, 9K, 10R, 10X, 15D, 15M, 16R, 19F, 19K, 20T, 25D, 25T, 25N, 25R | | | 3010691-48 | 1K ±5% |
| 2 | 9 | 3M, 6Y | | | 3010691-38 | RESISTOR 390Ω ½W ±5% |
| 37 | 8 | 1Y, 1D, 4V, 5D, 6N, 6F, 6G, 8H, 8M, 8W, 9L, 9U, 14N, 15E, 15G, 15W, 16C, 16T, 16V, 17B, 18X, 18Z, 19D, 19E, 19N, 19Q, 20S, 25B, 25D, 25E, 25K, 25M, 25P, 25Q, 25Y, 25X, 25Z | | | 3010310 | DIODE, EM120 |
| 1 | 7 | 1L | | | 2012333-05 | CAPACITOR .002 MF, 1KV ±10% |
| 8 | 6 | 6Y, 10T, 14Q, 15S, 15U, 18A, 20M, 23A | | | 2012122-18 | 330pf, 100V ±10% |
| 10 | 5 | 5R, 5X, 8Q, 9A, 12Y, 13J, 19H, 20V, 24H, 24M | | | 2012122-08 | 47pf, 100V ±10% |
| 1 | 4 | 17Y | | | 2012127-09 | 2 MF 15V ±10% |
| 1 | 3 | 23A | | | 2012128-07 | 1 MF 25V ±10% |
| 1 | 2 | 17Δ | | | 2012129-04 | CAPACITOR 2 MF 30V ±10% |
| 1 | 1 | | | C | 5012367-00 | BOARD PRINTED WIRING |

LIST OF MATERIAL

## LOGIC SYMBOLS




| SHEET INDEX | REV | G | G |
|---|---|---|---|
| | SH | 1 | 2 |

| | | |
|---|---|---|
| 00 | 5012346-00 | TYPE 2010 |
| NEXT ASSY | | EQUIPMENT |
| APPLICATION | | |

UNLESS OTHERWISE SPECIFIED
ALL DIMENSIONS IN INCHES
TOLERANCE ON FRACTIONS ±, DECIMALS ±, ANGLES ±
DECIMAL HOLE DIAMETER TOLERANCE: 0 THRU 250 +.003 −.002; 251 THRU 500 +.005 −.003; 501 & LARGER +.010 −.005
THREADS: EXT CL 2A, INT CL 2B
MATERIAL
FINISH

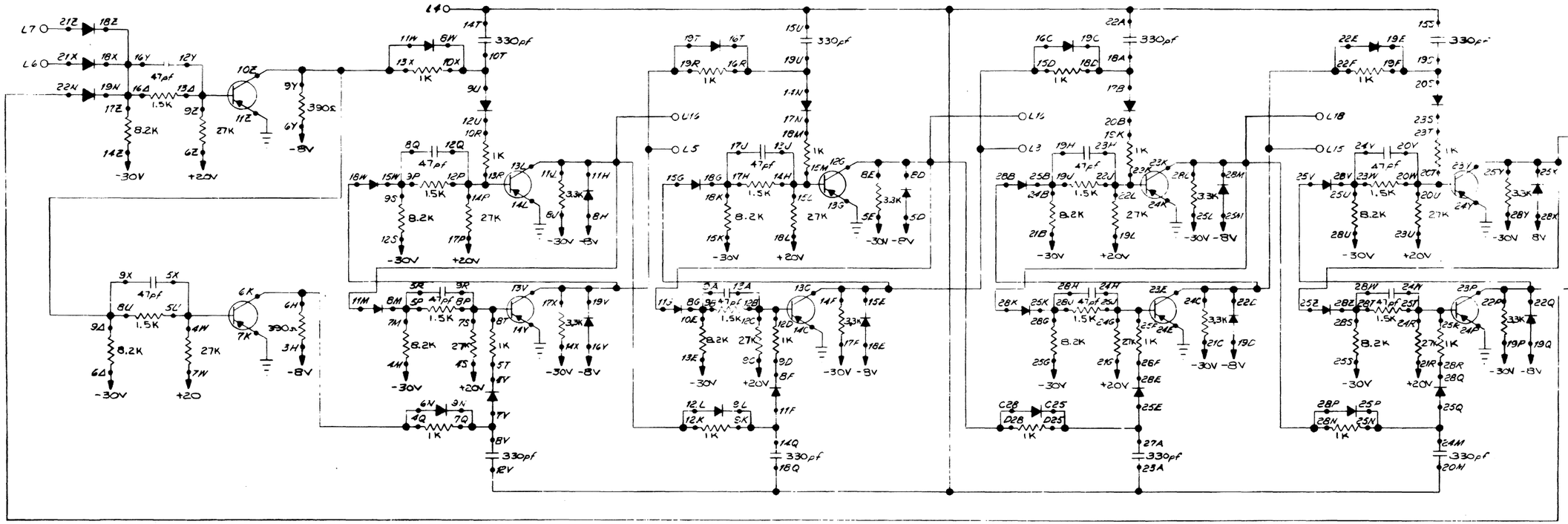
| | | |
|---|---|---|
| LAYOUT | Fred C Hamlin | DATE 3-19-62 |
| DRAFTSMAN | Edward Adams | 5-30-62 |
| CHECKER | S Peterka | 4-16-62 |
| ENGINEER PROD | R TODD R Todd | 6/28/62 |
| APPROVAL | J. J. Pekkala | 6/26/62 |
| CCT DES ON LAST A/I | D.B.H. 6/27/62 | |

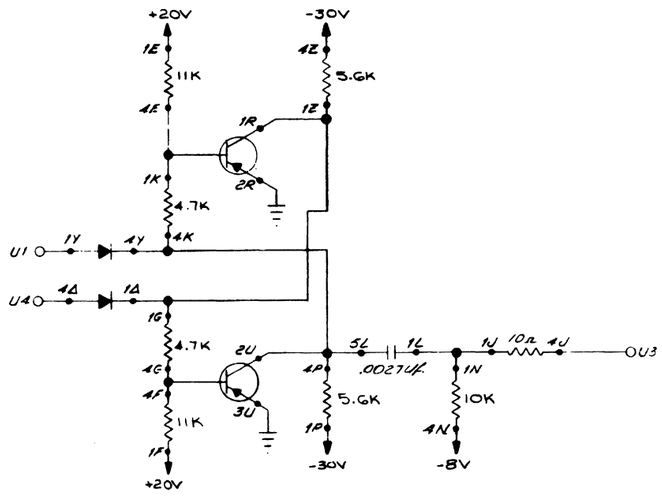
CLASS A
Remington Rand Univac
DIVISION OF SPERRY RAND CORPORATION
TITLE: CLOCK CIRCUITS ASSEMBLY TYPE B41B2
CODE IDENT NO.
SIZE D
DWG NO. 5012368
SCALE 8/1
SHEET 1 OF 3

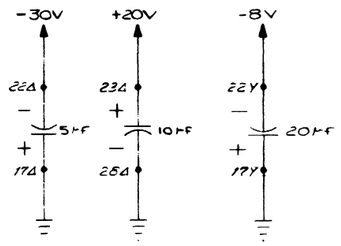
THIS DOCUMENT CONTAINS CONFIDENTIAL INFORMATION OF THE REMINGTON RAND DIVISION OF SPERRY RAND CORP. IT IS LOANED AND IS FURNISHED PURSUANT TO THE FOLLOWING UNDERSTANDING:
ON THE USER'S ESTABLISHING THAT THIS DOCUMENT AND THE INFORMATION CONTAINED THEREIN ARE NOT TO BE USED IN ANY MANNER INCONSISTENT WITH ITS BEING THE PROPERTY OF REMINGTON RAND DIVISION OF SPERRY RAND CORPORATION AND IS FURNISHED ON A CONFIDENTIAL BASIS, THE RECIPIENT AGREES TO RETURN IT TO REMINGTON RAND DIVISION OF SPERRY RAND CORPORATION.

BT451A
DO NOT SCALE THIS PRINT

| REVISIONS | | | | | | |
|---|---|---|---|---|---|---|
| SYM | ZONE | EIR | DESCRIPTION | CHG | DATE | APPROVED |
| D | | C1417-A | RELEASED | | 9-7-62 | RF |
| E | | C1518-A | SEE EIR | 23 | 11-7-63 | RF |
| F | | C1582-A | REVISION ON SH #1 | 24 | 4-17-64 | RF |
| G | | C1792-A | SEE EIR | 28 | 3-26-65 | RF |




(L/M CONTINUED FROM SHEET 1)

| QTY REQD | FIND | REF DES | CODE IDENT | DWG SIZE | PART OR IDENTIFYING NO | NOMENCLATURE OR DESCRIPTION |
|---|---|---|---|---|---|---|
| 1 | 21 | 1J | | | 4911674-01 | RESISTOR 10Ω ½W 5% |
| 12 | 20 | 1R,2U, 6K,10Z, 12G,13C, 13L,13Y, 23E,23K, 23F,23Y | | | 4908000-01 | TRANSISTOR |
| 2 | 19 | 1E,1F | | | 3010883-73 | RESISTOR 11K ½W ± 2% |
| 1 | 18 | 1N | | | 3010691-72 | RESISTOR 10K 1/2W ± 5% |
| 10 | 17 | 4M,6A, 9S,10E, 14Z,15K, 21B,25G, 25S,25U | | | 3010883-70 | RESISTOR 8.2K 1/2W ± 2% |

LIST OF MATERIAL

THIS DOCUMENT CONTAINS CONFIDENTIAL INFORMATION OF THE REMINGTON RAND DIVISION OF SPERRY RAND CORPORATION AND IS FURNISHED PURSUANT TO THE FOLLOWING INSTRUMENT

ON THE UNDERSTANDING THAT THIS DOCUMENT AND THE INFORMATION THEREON MAY NOT BE DEALT WITH IN ANY MANNER EXCEPT FOR THE PURPOSES OF THAT INSTRUMENT AND AS OTHERWISE PERMITTED IN WRITING BY THE REMINGTON RAND DIVISION OF SPERRY RAND CORPORATION

| | |
|---|---|
| AD | 5012346-00 |
| M | NEXT ASSY |
| | APPLICATION |
| TYPE 2010 | EQUIPMENT |

UNLESS OTHERWISE SPECIFIED
ALL DIMENSIONS IN INCHES
TOLERANCE ON FRACTIONS ± DECIMALS ± ANGLES ±
DECIMAL HOLE DIAMETER TOLERANCE
0 THRU .250 ± .003 — .251 THRU .500 ± .005 — .501 & LARGER ± .010
.002 — .003 — .005
THREADS ERT CL 2A, INT CL 2B
MATERIAL
FINISH

| | | |
|---|---|---|
| LAYOUT | F. HEERLEIN | 3/19/62 |
| DRAFTSMAN | F. BARTSCHT JR. | 3-30-62 |
| CHECKER | S. [illegible] | 4-16-62 |
| ENGINEER | R. TODD R. Todd | 8/28/62 |
| APPROVAL | [illegible] | 5/10/63 |
| CCT. DES | D. WELDENREICH | |

CLASS A

Remington Rand Univac
DIVISION OF SPERRY RAND CORPORATION

TITLE
CLOCK CIRCUITS ASSEMBLY
TYPE B41B2

| DENT NO | SIZE | DWG NO. |
|---|---|---|
| | D | 5012369 |

SCALE

SHEET 2 OF

BT451A

DO NOT SCALE THIS PRINT

DWG NO 5012368

MODIFICATION PART NO. 5012368

UNIVAC

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 22 | | | | | D | | | | |
| | | | | | A | C | | | | |
| | | | | | | | | | | |
| 1 | | 1 | - - - - - - - - - - | | | | C | 5012367 | 00 | |
| 1 | | 2 | (17DEL TA) | | | | C | 2012129 | 04 | |
| 1 | | 3 | (23DEL TA) | | | | C | 2012125 | 07 | |
| 1 | | 4 | 17Y | | | | C | 2012127 | 09 | |
| 10 | | 5 | 5R | 5X | 8D | | C | 2012122 | 03 | |
| | | R | 9A | 12Y | 13J | 02 | | | | |
| | | R | 14A | 20V | 24H | 03 | | | | |
| | | R | 24A | | | 04 | | | | |
| 8 | | 6 | 6V | 10T | 14G | | C | 2012122 | 13 | |
| | | R | 15A | 15J | 18A | 02 | | | | |
| | | R | 20A | 23A | | 03 | | | | |
| 1 | | 7 | 1L | | | | C | 2012333 | 05 | |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | LM | 5012368 | | | | J | * | | |
| | | | | | | | 1 | | | |
| | | | | | | G | 1 | | | |
| | | NOMENCLATURE OR DESCRIPTION | | | | | | | | |
| | | PT NO. 5012368 00 THRU 00 | | | | | | | | |
| | | PRINTED WIRING BOARD HOLE LOCATION B41 | | | | | C | | | |
| | | CAPACITOR FXD ELECT AL 50V DC 5 UF -10% +100% | | | | | H | | | |
| | | CAPACITOR FXD ELECT AL 25V DC 10 UF -10% +100% | | | | | H | | | |
| | | CAPACITOR FXD ELECT. AL 15V DC 20 UF -10% +100% | | | | | H | | | |
| | | CAPACITOR, FXD, CER TUBULAR 10% 47 PF | | | | | H | | | |
| | | CAPACITOR, FXD, CER TUBULAR 10% 330 PF | | | | | H | | | |
| | | CAPACITOR FXD PLSTC DIELECTRIC .0027 UF +-10% 100V | | | | | H | | | |



UNIVAC

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 22 | | | | | D | | | | |
| | | | | | A | C | | | | |
| | | R | 19F | 19K | 20T | 06 | | | | |
| | | R | 25D | 25F | 25N | 05 | | | | |
| | | R | 25R | | | 06 | | | | |
| 10 | | 11 | 5P | 5U | 9B | | C | 3010893 | 52 | RESISTOR FXD FILM - 1500 OHMS 1/2WATT +- 2% |
| | | R | (13DEL TA) | | 18H | 02 | | | | |
| | | R | 19J | 20W | 25J | 03 | | | | |
| | | R | 25T | | | 04 | | | | |
| 10 | | 12 | 4S | 4W | 6X | | C | 3010893 | 62 | RESISTOR FXD FILM - 27000 OHMS 1/2WATT +- 2% |
| | | R | 9C | 14P | 15L | 02 | | | | |
| | | R | 19L | 20J | 21G | 03 | | | | |
| | | R | 21R | | | 04 | | | | |
| 8 | | 13 | 5E | 6J | 25L | | C | 3010893 | 60 | RESISTOR FXD FILM - 3300 OHMS 1/2WATT +- 2% |
| | | R | 25Y | | | 02 | | | | |
| 8 | | 14 | 14F | 14K | 19P | | C | 3010893 | 60 | RESISTOR FXD FILM - 3300 OHMS 1/2WATT +- 2% |
| | | R | 21C | | | 02 | | | | |
| 2 | | 15 | 1S | 1K | | | C | 3010893 | 64 | RESISTOR FXD FILM - 4700 OHMS 1/2WATT +- 2% |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | LM | 5012368 | | | | J | * | | |
| | | | | | | | 1 | | | |
| | | | | | | G | 3 | | | |
| | | NOMENCLATURE OR DESCRIPTION | | | | | | | | |



UNIVAC

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 22 | | | | | D | | | | |
| | | | | | A | C | | | | |
| 37 | | 8 | 1Y | (1DELT A) | | | C | 3010810 | 00 | SEMICONDUCTOR DEVICE DIODE GERMANIUM: EM 120 |
| | | R | 4V | 5D | 6N | 02 | | | | |
| | | R | 8F | 8G | 8H | 03 | | | | |
| | | R | 8N | 8W | 9L | 04 | | | | |
| | | R | 9U | 14N | 15E | 05 | | | | |
| | | R | 15G | 15W | 16C | 06 | | | | |
| | | R | 16T | 16V | 17B | 07 | | | | |
| | | R | 18X | 18Z | 19D | 08 | | | | |
| | | R | 19E | 19N | 19Q | 09 | | | | |
| | | R | 20S | 25B | 25C | 10 | | | | |
| | | R | 25E | 25K | 25M | 11 | | | | |
| | | R | 25P | 25Q | 25V | 12 | | | | |
| | | R | 25X | 25Z | | 13 | | | | |
| 2 | | 9 | 3M | 6Y | | | C | 3010883 | 38 | RESISTOR FXD FILM - 390 OHMS 1/2WATT +- 2% |
| 16 | | 10 | 4Q | 5T | 9D | | C | 3010883 | 43 | RESISTOR FXD FILM - 620 OHMS 1/2WATT +- 2% |
| | | R | 9K | 10R | 10X | 02 | | | | |
| | | R | 15D | 15M | 16R | 03 | | | | |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | LM | 5012368 | | | | J | * | | |
| | | | | | | | 1 | | | |
| | | | | | | G | 2 | | | |
| | | NOMENCLATURE OR DESCRIPTION | | | | | | | | |



UNIVAC

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 22 | | | | | D | | | | |
| | | | | | A | C | | | | |
| 2 | | 16 | 1P | 1Z | | | C | 3010883 | 66 | RESISTOR FXD FILM - 5600 OHMS 1/2WATT +- 2% |
| 10 | | 17 | 4M | (6DELT A) | | | C | 3010883 | 70 | RESISTOR FXD FILM - 6200 OHMS 1/2WATT +- 2% |
| | | R | 9S | 10E | 14Z | 02 | | | | |
| | | R | 15K | 21B | 25G | 03 | | | | |
| | | R | 25S | 25U | | 04 | | | | |
| 1 | | 18 | 1N | | | | C | 3010893 | 72 | RESISTOR FXD FILM - 10000 OHMS 1/2WATT +- 2% |
| 2 | | 19 | 1E | 1F | | | C | 3010883 | 73 | RESISTOR FXD FILM - 11000 OHMS 1/2WATT +- 2% |
| 12 | | 20 | 1R | 2U | 6K | | C | 4908000 | 01 | TRANSISTOR PNP GERMANIUM HAS LEAD SPREADER |
| | | R | 10Z | 12G | 13C | 02 | | | | |
| | | R | 13L | 13V | 23E | 03 | | | | |
| | | R | 23K | 23P | 23Y | 04 | | | | |
| 1 | | 21 | 1J | | | | C | 3162267 | 14 | RESISTOR,FIXED,COMPOSITION 10 OHMS 1/2 WATT +-5% |
| | | Z01 | - - - | - - - | - - - | - - - | C | 3992 | 01 | L/M PIC G REV HISTORY |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | LM | 5012368 | | | | J | * | | |
| | | | | | | | 1 | | | |
| | | | | | | G | 4 | | | |
| | | NOMENCLATURE OR DESCRIPTION | | | | | | | | |

DETACHED LIST OF MATERIAL

CLOCK CIRCUITS ASSY TYPE B4182

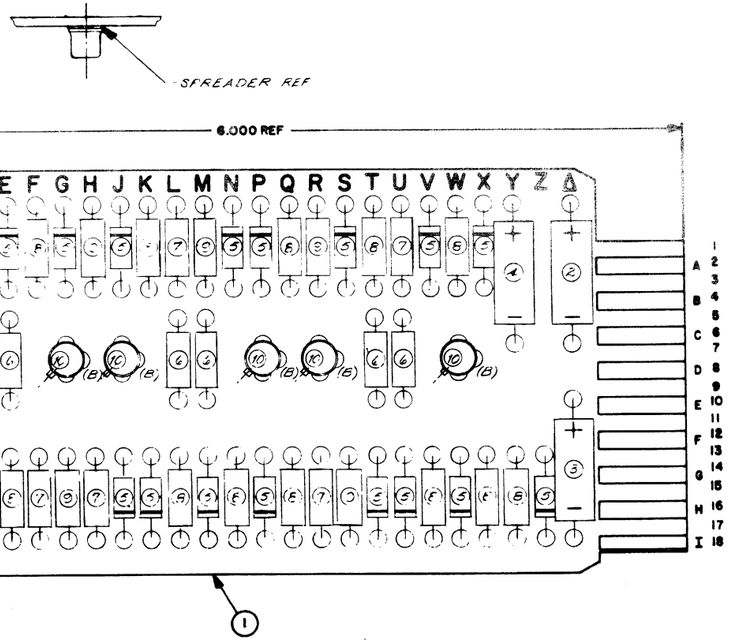
LM 5012368 J

22

UNIVAC

MAY 1967

| REFERENCE DES | CODE MENT | DWG NO | DATE | NOMENCLATURE OR DESCRIPTION |
|---|---|---|---|---|
| Z02 | C | 6565 | 65 | L/M G PIC G REV HISTORY |
| Z03 | H | 18062 | 04 | L/M H PIC G REV HISTORY |
| Z04 | H | 18618 | 09 | L/M J PIC G REV HISTORY * |




NOTES:

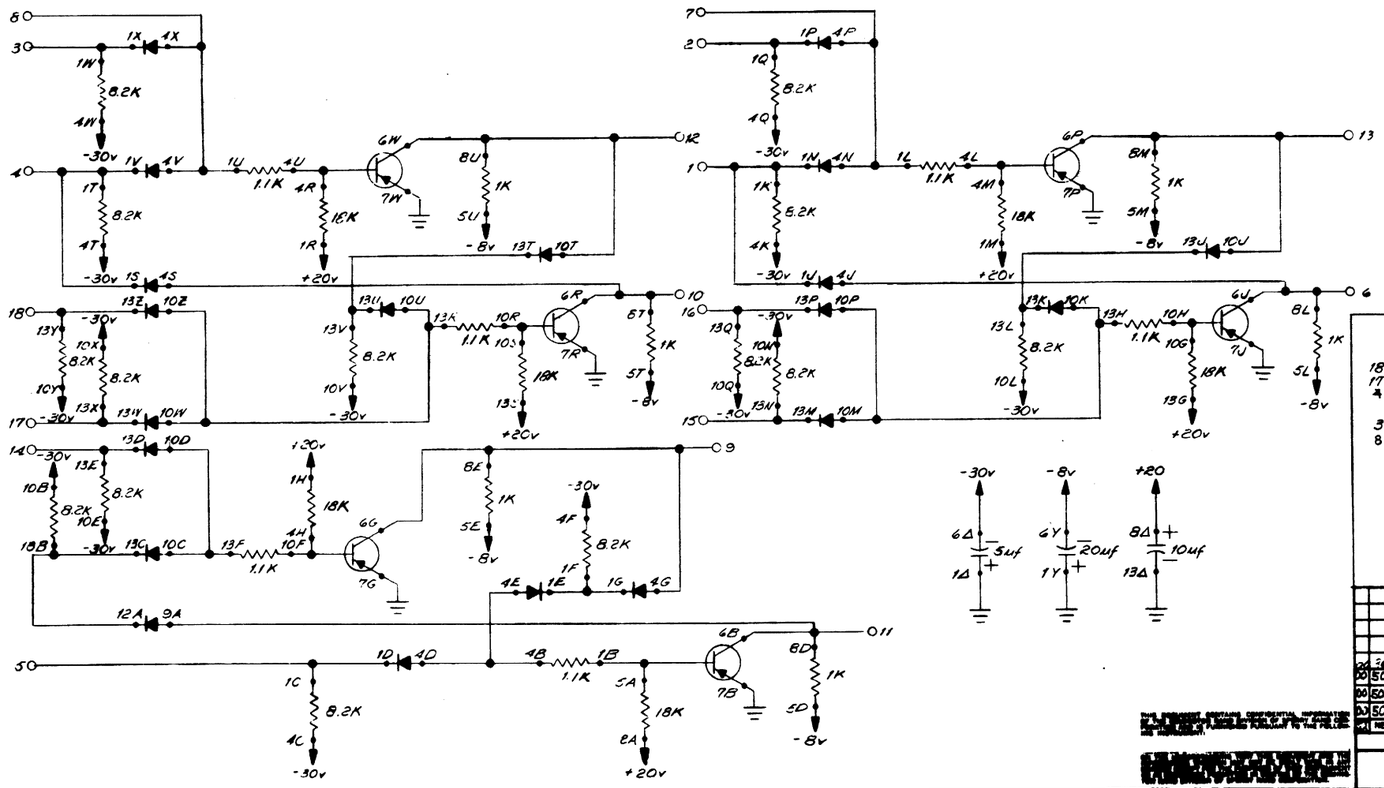
1) STRIPE ON DIODE BODY DENOTES CATHODE END.
   ○ INDICATES FND NO.
   <> INDICATES DESIGNATIONS STAMPED ON COMPONENT FOR REF ONLY.
   ( ) INDICATES DESIGNATIONS FOR REF. ONLY & SHALL NOT BE STAMPED.
2) UNLESS OTHERWISE DESIGNATED

| | | | |
|---|---|---|---|
| CONTACT | A | SHALL BE | ⏚ |
| CONTACT | B | SHALL BE | SPARE |
| CONTACT | C | SHALL BE → | -9V |
| CONTACTS | D & E | SHALL BE → | -30V |
| CONTACT | F | SHALL BE → | -20V |
| CONTACT | G | SHALL BE → | +20V |
| CONTACT | H | SHALL BE → | SPARE |
| CONTACT | I | SHALL BE | ⏚ |

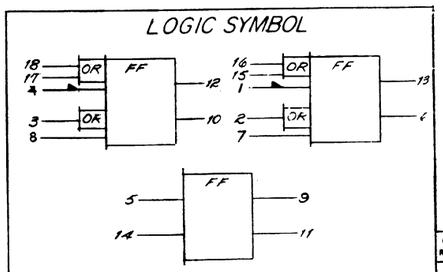
3) MINIMUM SPACE FOR THIS BOARD IS 1/2 INCH
4) ASSEMBLE PER (501)
5) INSERT COMPONENTS AT 1X & 10Z PRIOR TO COMPONENTS AT 1Y & 8A
6) AXIAL LEAD COMPONENTS EXCEPT DIODES, TO BE MOUNTED .010 MIN. FROM THE BOARD.
7) TEST PER (502) & (503)

| REVISIONS | | | | | | |
|---|---|---|---|---|---|---|
| SYM | ZONE | LTR | DESCRIPTION | CHK | DATE | APPROVED |
| C | — | C-3817-1 | RELEASED | | 7-7-62 | RS |
| D | | C-3982-1 | ADDED NOTE 7 | | 2-18-63 | |
| E | | C-4113-1 | SEE EIR | RN | 3-30-64 | |
| F | | C-4358-1 | SEE EIR | RC | 7/6/64 | |

FOR MATERIAL REQUIREMENTS SEE DETACHED LIST OF MATERIAL
LM 5012372
REVISION LETTER IN LWR RH CORNER APPLIES TO PICTORIAL SHT (S)
LM REV LETTER CONTROLS DOCUMENT




LOGIC SYMBOL




| QTY REQD | FIND | REF DES | CODE IDENT | DWG SIZE | PART OR IDENTIFYING NO | NOMENCLATURE OR DESCRIPTION |
|---|---|---|---|---|---|---|

LIST OF MATERIAL

| | | |
|---|---|---|
| 00 | 5012348-00 | TYPE 2011 |
| 00 | 5012347-00 | TYPE 2009 |
| 00 | 5012346-00 | TYPE 2010 |
| NEXT ASSY | | EQUIPMENT |
| APPLICATION | | |

UNLESS OTHERWISE SPECIFIED
ALL DIMENSIONS IN INCHES
TOLERANCE ON FRACTIONS ±, DECIMALS ±, ANGLES ±
DECIMAL HOLE DIAMETER TOLERANCE: 0 THRU 250 -.003 -.002; 251 THRU 520 -.005 -.003; 521 & LARGER -.010 -.005
THREADS EXT CL 2A, INT CL 2B
MATERIAL
FINISH

| | | |
|---|---|---|
| LAYOUT | M.A. Kraus | DATE 9-6-62 |
| DRAFTSMAN | Edward Adams | 9-7-62 |
| CHECKER | S. Otaka | 9-19-62 |
| ENGINEER PROD | P. TODD R. Todd | 9/28/62 |
| APPROVAL | | |
| CCT. DES. | NOT ENGINEERED | |

CLASS A
Remington Rand Univac
DIVISION OF SPERRY RAND CORPORATION
TITLE: NEGATIVE INPUT FLIP FLOP ASSEMBLY TYPE B45AI
CODE IDENT NO
SIZE D
DWG NO 5012372
SCALE 8/1
SHEET OF
DO NOT SCALE THIS PRINT
BT455A
C D E F

DWG NO 5012372

DETACHED LIST OF MATERIAL

NEGATIVE INPUT FLIP FLOP

ASSEMBLY TYPE

UNIVAC

LM 5012372 F

| QTY PER | MFG QTY | LM | REFERENCE DES A | B | C | CODE IDENT | IDENTIFICATION INFO PART OR IDENT NO | ENG NO | DASH | NOMENCLATURE OR DESCRIPTION | D C L |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | - 6 | | | | | | | | PT NO. 5012372 00 THRU 00 | |
| 1 | | 1 | - - - - - - - - - - | | | C | 5012371 | 00 | | PRINTED WIRING BD HOLE LOCATION B45 | C |
| 1 | | 2 | 1DELTA | | | C | 2012129 | 04 | | CAPACITOR FXD ELECT AL 50V DC 5 UF -10% +100% | H |
| 1 | | 3 | 8DELTA | | | C | 2012128 | 07 | | CAPACITOR FXD ELECT AL 25V DC 10 UF -10% +100% | H |
| 1 | | 4 | 1Y | | | C | 2012127 | 39 | | CAPACITOR FXD ELECT. AL 15V DC 20 UF -10% +100% | H |
| 20 | | 5 | 10A | 10Z | 10T | C | 3010910 | 00 | | SEMICONDUCTOR DEVICE | H |
| | | R | 10J | 10M | 10P | 02 | | | | DIODE GERMANIUM EM 120 | |
| | | R | 10J | 10K | 10C | 03 | | | | | |
| | | R | 10D | 1X | 9A | 04 | | | | | |
| | | R | 1S | 1V | 1N | 05 | | | | | |
| | | R | 1P | 1G | 1J | 06 | | | | | |
| | | R | 1D | 1E | | 07 | | | | | |
| 4 | | 6 | 5D | 5E | 5L | C | 3010883 | 48 | | RESISTOR FXD FILM = | H |
| | | R | 5M | 5T | 5N | 02 | | | | 1000 OHMS 1/2WATT +- 2% | |

NOTE: CHANGE SHEETS MADE ON ITEMS △





DETACHED LIST OF MATERIAL

NEGATIVE INPUT FLIP FLOP

ASSEMBLY TYPE

UNIVAC

LM 5012372 F

| QTY PER | MFG QTY | LM | REFERENCE DES A | B | C | CODE IDENT | IDENTIFICATION INFO PART OR IDENT NO | ENG NO | DASH | NOMENCLATURE OR DESCRIPTION | D C L |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 6 | | 7 | 1B | 1L | 1U | C | 3010883 | 49 | | RESISTOR FXD FILM = | H |
| | | R | 10F | 10H | 10R | 02 | | | | 1100 OHMS 1/2WATT +- 2% | |
| 18 | | 8 | 1C | 1F | 1K | C | 3010883 | 70 | | RESISTOR FXD FILM = | H |
| | | R | 10 | 1T | 1W | 02 | | | | 8200 OHMS 1/2WATT +- 2% | |
| | | R | 103 | 10E | 10L | 03 | | | | | |
| | | R | 10N | 10Q | 10V | 04 | | | | | |
| | | R | 10A | 10Y | | 05 | | | | | |
| 6 | | 9 | 1H | 1M | 1R | C | 3010883 | 78 | | RESISTOR FXD FILM = | H |
| | | R | 2A | 10C | 10S | 02 | | | | 18000 OHMS 1/2WATT +- 2% | |
| 6 | | 10 | 6B | 6G | 6J | C | 4000000 | 01 | | TRANSISTOR PNP GERMANIUM | H |
| | | R | 6P | 6R | 6W | 02 | | | | MAS LEAD SPREADER | |
| | | R01 | - - - - - - - - - - | | | D | 5014314 | 00 | | CIRCUIT PACKAGE TEST SHEET TYPE B45 | C |
| | | S01 | - - - - - - - - - - | | | | 0500410 | | | PRINTED CKT SPEC FOR ASSY OF | H |
| | | S02 | - - - - - - - - - - | | | A | CS01985 | 00 | | GENERAL 1004 TEST SPEC | C |

NOTE: CHANGE SHEETS MADE ON ITEMS △



DETACHED LIST OF MATERIAL

NEGATIVE INPUT FLIP FLOP

ASSEMBLY TYPE

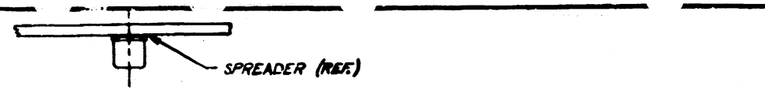
UNIVAC

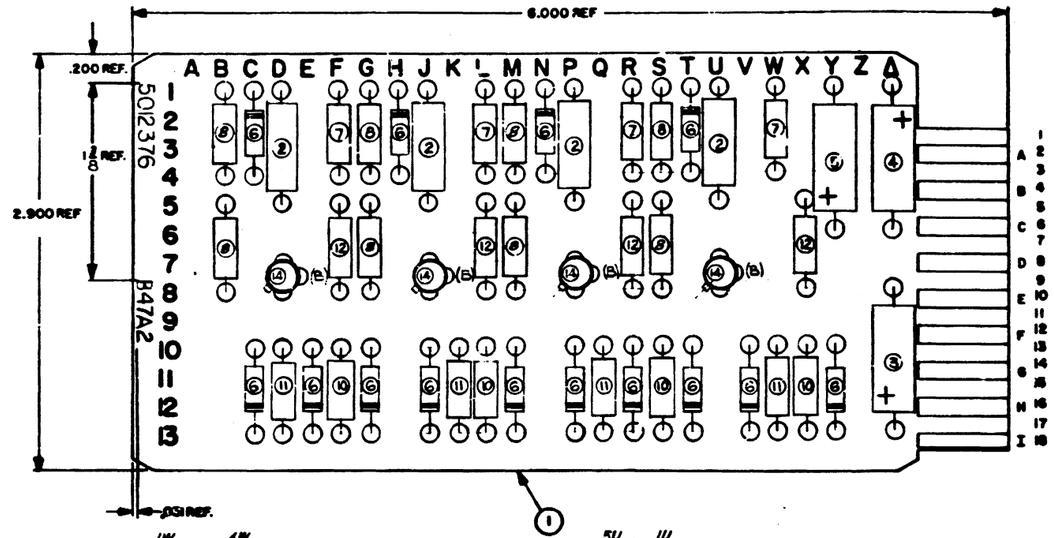
LM 5012372 F

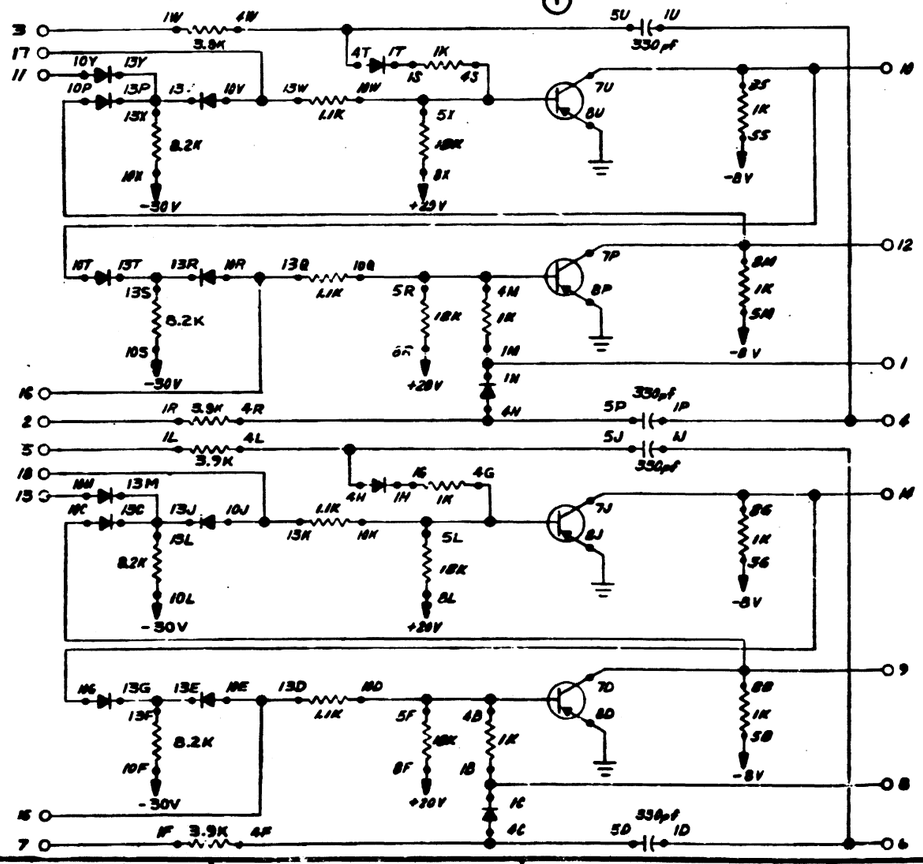
| QTY PER | MFG QTY | LM | REFERENCE DES A | B | C | CODE IDENT | IDENTIFICATION INFO PART OR IDENT NO | ENG NO | DASH | NOMENCLATURE OR DESCRIPTION | D C L |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | S03 | - - - - - - - - - - | | | D | 5014314 | 00 | | CIRCUIT PACKAGE TEST SHEET TYPE B45 | C |
| | | Z01 | - - - - - - - - - - | | | C | 1382 | 01 | | L/M PIC D REV HISTORY | |
| | | Z02 | - - - - - - - - - - | | | C | 4113 | 01 | | L/M E PIC E REV HISTORY | |
| | | Z03 | - - - - - - - - - - | | | C | 7958 | 01 | | L/M F PIC F REV HISTORY | |
| | | Z03 | - - - - - - - - - - | | | | 4125 | 32 | | 4M F PIC F REVISED | |

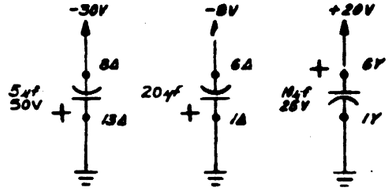
FEB 22 1966

NOTE: CHANGE SHEETS MADE ON ITEMS △



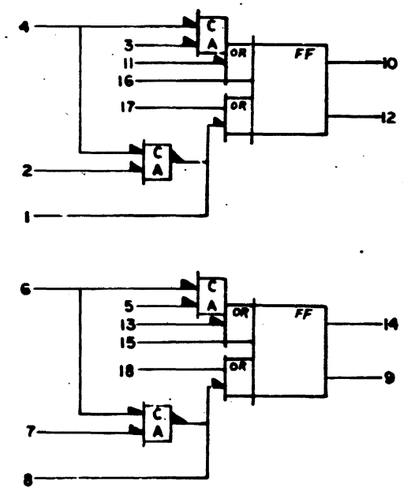

NOTES:

1) STRIPE ON DIODE BODY DENOTES CATHODE END.
   ◯ INDICATES FIND NO.
   <> INDICATES DESIGNATIONS STAMPED ON COMPONENT FOR REF ONLY.
   ( ) INDICATES DESIGNATIONS FOR REF. ONLY & SHALL NOT BE STAMPED.
2) UNLESS OTHERWISE DESIGNATED
   - CONTACT A SHALL BE ⏚
   - CONTACT B SHALL BE SPARE
   - CONTACT C SHALL BE → -8V
   - CONTACTS D & E SHALL BE → -30V
   - CONTACT F SHALL BE → -20V
   - CONTACT G SHALL BE → +20V
   - CONTACT H SHALL BE → SPARE
   - CONTACT I SHALL BE ⏚
3) MINIMUM SPACE FOR THIS BOARD IS 1/2 INCH
4) ASSEMBLE PER (501)
5) AXIAL LEAD COMPONENTS EXCEPT DIODES TO BE MOUNTED .010 MIN. FROM THE BOARD.
6) TEST PER (502) & (R01)

REVISIONS

| LTR | ZONE | E/R | DESCRIPTION | CHG | DATE | APPROVED |
|---|---|---|---|---|---|---|
| | | C4425 -39 | REDRAWN NO CHG, LAST REV C, E/R C 5445-12 | | 4/4/68 | |
| E | | E11473 -1 | SEE E/R | | 11/69 | |

LOGIC SYMBOLS




FOR MATERIAL REQUIREMENTS SEE DETACHED LIST OF MATERIAL
LM 5012376
REVISION LETTER IN LWR RH CORNER APPLIES TO PICTORIAL SHT. 1
LM REV LETTER CONTROLS DOCUMENT

LIST OF MATERIAL

| QTY | PART NO. | APPLICATION |
|---|---|---|
| | 3611201 | 0603 |
| | 5012533-002 | TYPE 2011 |
| | 5012347-002 | TYPE 2009 |
| | 5012600-002 | TYPE 2010 |
| | NEXT ASSY | EQUIPMENT |

UNLESS OTHERWISE SPECIFIED
ALL DIMENSIONS ARE IN INCHES
TOLERANCE ON FRACTIONS ± | DECIMALS .x ± | .xx ± | ANGLES ±
DECIMAL HOLE DIAMETER TOLERANCE
.xxx ± .003 | .xxx ± .005 | .xxx ± .002 | .xxx ± .003 | ø .xxx & LARGER ± .010 | ø .xxx & LARGER ± .005
THREADS LET CL 2A, GW CL 2B
MATERIAL
FINISH

| | NAME | DATE |
|---|---|---|
| DRAWN | M.A. KRAUS | 3-8-62 |
| DRAFTSMAN | KARL A. OCH | 4-5-62 |
| CHECKED | S. ANTAKIS | 4-6-62 |
| ENGINEER APPD | R. TODD | 8-28-62 |
| APPROVAL | J.D. STEHLIK | 8-28-62 |
| CCP DES LD HLDOCNTLR P | D.O.N. 8/27/62 | |

CLASS A

Farrington Manufacturing Division of Sperry Rand Corporation

TITLE
A.C. FLIP FLOP ASSEMBLY TYPE B47A2

SIZE D | DWG NO 5012376

SCALE 8/1 | SHEET

BT457 B

UNIVAC

PARTS LIST | CODE IDENT 92120 | ISSUE DATE 07/10/69 | CONTROL C 10 | CA | TYPE M | COMM CODE | ST A | PL | DWG NO 5012376 | SHEET 1 | PL REV E

TITLE OF DRAWING TO BE DETACHED: AC FLIP FLOP ASST TYPE B47 | U/M A EA | DWG SIZE D | RANGE 00 THRU 00 | ISSUE 2 | PIC REV E

| FIND NO | QUANTITY REQUIRED | U/M | S | PART OR IDENT NO DRAWING NO | DASH | NOMENCLATURE OR DESCRIPTION | S | C |
|---|---|---|---|---|---|---|---|---|
| 1 | 1 | EA | C | 5012375 | -00 | PRINTED WIRING BD HOLE | | |
| 2 | 4 | EA | C | 2012122 | -18 | CAPACITOR, FXD, CER TUBULAR 10% 330 PF | | |
| | | | | REF DES | 1 | 1D 1J 1P 1U | | |
| 3 | 1 | EA | C | 2012129 | -04 | CAPACITOR FXD ELECT AL 50V DC 5 UF -10% +100% | | |
| | | | | REF DES | 1 | 8DELTA | | |
| 4 | 1 | EA | C | 2012127 | -09 | CAPACITOR FXD ELECT, AL 15V DC 20 UF -10% +100% | | |
| | | | | REF DES | 1 | 1DELTA | | |
| 5 | 1 | EA | C | 2012128 | -07 | CAPACITOR FXD ELECT AL 25V DC 10 UF -10% +100% | | |
| | | | | REF DES | 1 | 1Y | | |
| 6 | 14 | EA | C | 3010810 | -00 | SEMICONDUCTOR DEVICE DIODE GERMANIUM: EM 120 | | |
| | | | | REF DES | 1 | 1C 1H 1N 1T 1CC 10E 10F 10J 10M | | |
| | | | | | 4 | 10P 10R 10T 10V 10Y | | |
| 7 | 4 | EA | C | 3010883 | -62 | RESISTOR FXD FILM - 3900 OHMS 1/2WATT +- 2% | | |
| | | | | REF DES | 1 | 1F 1L 1R 1W | | |
| 8 | 8 | EA | C | 3010883 | -48 | RESISTOR FXD FILM - 1000 OHMS 1/2WATT +- 2% | | |
| | | | | REF DES | 1 | 1B 1G 1M 1S 5B 5G 5M 5S | | |
| 10 | 4 | EA | C | 3010883 | -70 | RESISTOR FXD FILM - 8200 OHMS 1/2WATT +- 2% | | |
| | | | | REF DES | 1 | 10F 10L 10S 10X | | |
| 11 | 4 | EA | C | 3010883 | -49 | RESISTOR FXD FILM - 1100 OHMS 1/2WATT +- 2% | | |
| | | | | REF DES | 1 | 10D 10K 10Q 10W | | |

UNIVAC

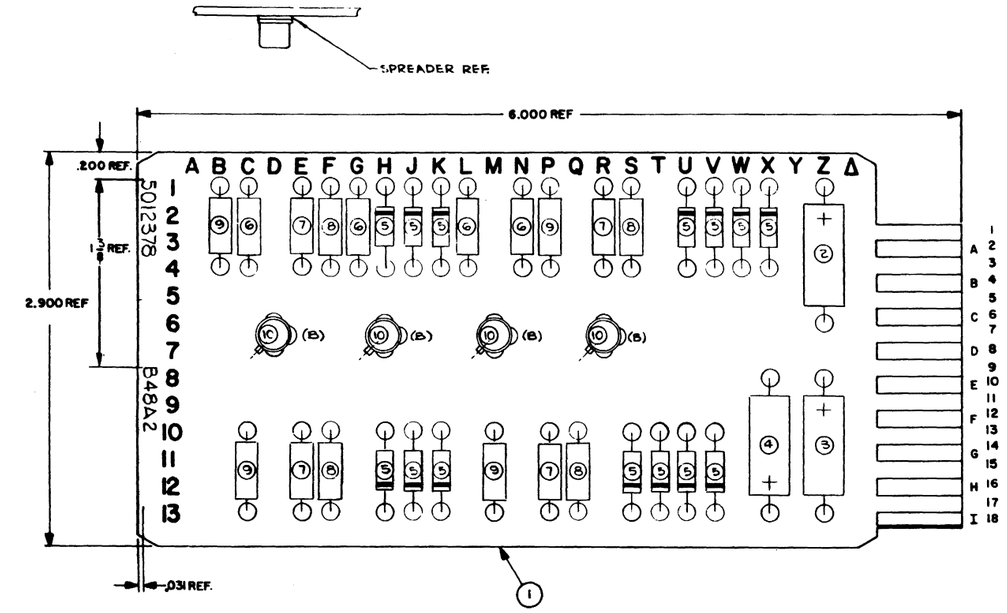
PARTS LIST | CODE IDENT 92120 | ISSUE DATE 07/10/69 | CONTROL C 10 | CA | TYPE M | COMM CODE | ST A | PL | DWG NO 5012376 | SHEET 2 | PL REV E

TITLE OF DRAWING TO BE DETACHED: AC FLIP FLOP ASST TYPE B47 | U/M A EA | DWG SIZE D | RANGE 00 THRU 00 | ISSUE 2 | PIC REV E

| FIND NO | QUANTITY REQUIRED | U/M | S | PART OR IDENT NO DRAWING NO | DASH | NOMENCLATURE OR DESCRIPTION | S | C |
|---|---|---|---|---|---|---|---|---|
| 12 | 4 | EA | C | 3010883 | -78 | RESISTOR FXD FILM - 18000 OHMS 1/2WATT +- 2% | | |
| | | | | REF DES | 1 | 5F 5L 5R 5X | | |
| 14 | 4 | EA | A | 4908000 | -01 | TRANSISTOR PNP GERMANIUM HAS LEAD SPREADER | | |
| | | | | REF DES | 1 | 7D 7J 7P 7U | | |
| A01 | | EA | D | 5014315 | -00 | CIRCUIT PACKAGE TEST SHEET TYPE B47 | | |
| S01 | | XX | | DS00410 | | PRINTED CKT SPEC FOR ASSY OF | | |
| S02 | | X | A | CS01985 | -00 | GENERAL 1004 TEST SPEC | | |
| Z01 | | | | C 1382 | 01 | EIR HISTORY: EIR REV , PL REV , PIC REV C | | |
| Z02 | | | | C 6565 | 12 | EIR HISTORY: EIR REV , PL REV C, PIC REV C | | |
| Z03 | | | | M 18062 | 04 | EIR HISTORY: EIR REV , PL REV D, PIC REV C | | |
| Z04 | | | | C 4125 | 39 | EIR HISTORY: EIR REV , PL REV D, PIC REV C | | |
| Z05 | | | | C 11673 | 01 | EIR HISTORY: EIR REV , PL REV E, PIC REV E | | |

DM 7/14/69

| REVISIONS | | | | | | |
|---|---|---|---|---|---|---|
| SYM | ZONE | ECR | DESCRIPTION | BY | DATE | APPROVED |
| D | — | C1381-1 | RELEASED | | 9-7-62 | |
| E | | C1382-1 | ADDED NOTE 6 | | 8-22-63 | |

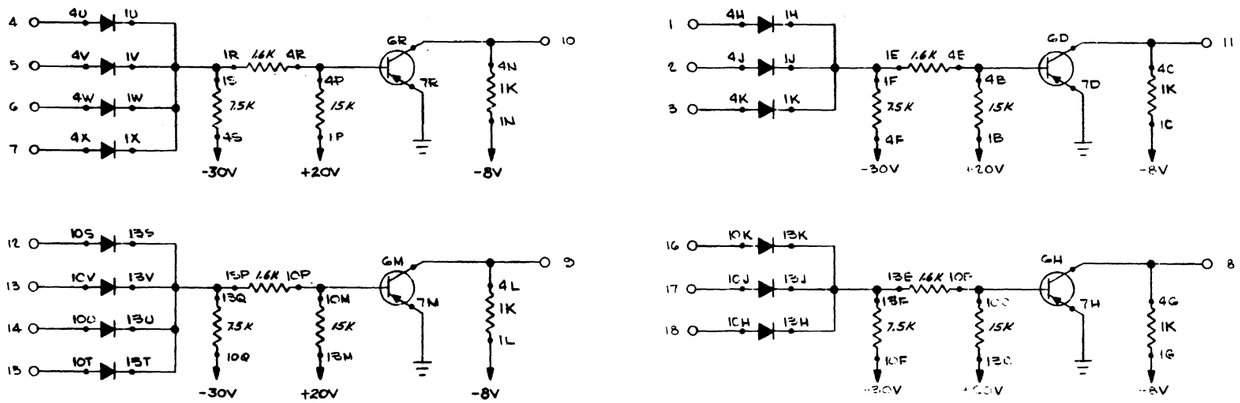


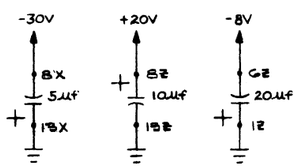

NOTES:

1) STRIPE ON DIODE BODY DENOTES CATHODE END.
   ◯ INDICATES FIND NO.
   <> INDICATES DESIGNATIONS STAMPED ON COMPONENT FOR REF ONLY.
   ( ) INDICATES DESIGNATIONS FOR REF. ONLY & SHALL NOT BE STAMPED.
2) UNLESS OTHERWISE DESIGNATED

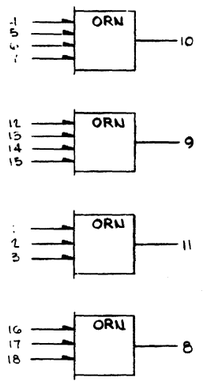
| | | | |
|---|---|---|---|
| CONTACT | A | SHALL BE | ⏚ |
| CONTACT | B | SHALL BE | SPARE |
| CONTACT | C | SHALL BE → | -8V |
| CONTACTS | D & E | SHALL BE → | -30V |
| CONTACT | F | SHALL BE → | -20V |
| CONTACT | G | SHALL BE → | +20V |
| CONTACT | H | SHALL BE → | SPARE |
| CONTACT | I | SHALL BE | ⏚ |

3) MINIMUM SPACE FOR THIS BOARD IS $\frac{1}{2}$ INCH
4) ASSEMBLE PER DS 410.
5) AXIAL LEAD COMPONENTS, EXCEPT DIODES, TO BE MOUNTED .010 MIN FROM THE BOARD.
6) TEST PER C51985 & 5014316




## LOGIC SYMBOL




| CTY REQD | FIND | REF DES | CODE IDENT | DWG SIZE | PART OR IDENTIFYING NO | NOMENCLATURE OR DESCRIPTION |
|---|---|---|---|---|---|---|
| 4 | 10 | GD, GH GM, GR | | | 4908000-01 | TRANSISTOR |
| 4 | 9 | 1B, 1P 10C, 10H | | | 3010883-76 | RESISTOR 15K 1/2W ±2% |
| 4 | 8 | 1F, 1S 10F, 10Q | | | 3010883-69 | RESISTOR 7.5K 1/2W ±2% |
| 4 | 7 | 1E, 1R 10E, 10P | | | 3010883-53 | RESISTOR 1.6K 1/2W ±2% |
| 4 | 6 | 1C, 1G 1L, 1N | | | 3010691-48 | RESISTOR 1K 1/2W ±5% |
| 14 | 5 | 1H, 1J 1K, 1U 1V, 1W 1X, 10H 10J, 10K 10E, 10T 10U, 10V | | | 3010810 | DIODE EM120 |
| 1 | 4 | 8X | | | 2012120-04 | CAPACITOR 5 μf 50V +10 % ±100 % |
| 1 | 3 | 8Z | | | 2012128-07 | CAPACITOR 10 μf 25V +10 % ±100 % |
| 1 | 2 | 12 | | | 2012127-09 | CAPACITOR 20 μf 15V +10 % ±100 % |
| 1 | 1 | | | C | 5012377-00 | BOARD PRINTED WIRING |

LIST OF MATERIAL

| | | |
|---|---|---|
| 00 | 5012348-00 | TYPE 2011 |
| 00 | 5012347-00 | TYPE 2009 |
| 00 | 5012346-00 | TYPE 2010 |
| REF NEXT ASSY | | EQUIPMENT |
| APPLICATION | | |

UNLESS OTHERWISE SPECIFIED
ALL DIMENSIONS IN INCHES
TOLERANCE ON FRACTIONS ± DECIMALS ± ANGLES ±
DECIMAL HOLE DIAMETER TOLERANCE: 0 THRU 250 - .003 — .002; 251 THRU 500 - .005 — .003; 501 & LARGER - .010 — .005
THREADS: EXT CL 2A, INT CL 2B
MATERIAL
FINISH

| | | |
|---|---|---|
| LAYOUT | Dale W. Geh | DATE 3-16-62 |
| DRAFTSMAN | MIKE MARINKO | 3-14-62 |
| CHECKER | S. Cudahy | 3-27-62 |
| ENGINEER PROD | A. TODD R. Todd | 8/28/62 |
| APPROVAL | J. D. Sallee | 8/29/62 |
| CCY DES | NEDDE MIRIC D.N. 9/27/62 | |

CLASS A

Remington Rand Univac
DIVISION OF SPERRY RAND CORPORATION

TITLE
POSITIVE AMPLIFIER (1) ASSEMBLY
TYPE B48A2

CODE IDENT NO. —
SIZE D
DWG NO. 5012378
SCALE 8/1
SHEET OF

BT 4580

DO NOT SCALE THIS PRINT

THIS DOCUMENT CONTAINS CONFIDENTIAL INFORMATION OF THE REMINGTON RAND DIVISION OF SPERRY RAND CORPORATION AND IS FURNISHED PURSUANT TO THE FOLLOWING INSTRUMENT.

ON THE UNDERSTANDING THAT THIS DOCUMENT AND THE INFORMATION THEREIN MAY NOT BE DISCLOSED TO ANY MANNER EXCEPT FOR THE PURPOSES OF THAT INSTRUMENT OR AS OTHERWISE PERMITTED IN WRITING BY THE REMINGTON RAND DIVISION OF SPERRY RAND CORPORATION.

DWG NO 5012378

DETACHED LIST OF MATERIAL

POSITIVE AMPLIFIER (1) ASSY

TYPE B4842

UNIVAC

OCT. 22'66

LM 5012378 F *

1

E 1

PT .D. 5012378 00 THRU 00

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | 4 | | | | | | | | |
| 1 | | 1 | - - - - - - - - - - - - | | | C | 5012377 | 00 | PRINTED WIRING BD MOLE | C |
| | | | | | | | | | LOCATION B4B | |
| 1 | | 2 | 1Z | | | C | 2012127 | 09 | CAPACITOR FXD ELECT. AL 15V DC | H |
| | | | | | | | | | 20 UF -10% +100% | |
| 1 | | 3 | 8Z | | | C | 2012128 | 07 | CAPACITOR FXD ELECT AL 25V DC | H |
| | | | | | | | | | 10 UF -10% +100% | |
| 1 | | 4 | 8X | | | C | 2012129 | 04 | CAPACITOR FXD ELECT AL 50V DC | H |
| | | | | | | | | | 5 UF -10% +100% | |
| 14 | | 5 | 1H | 1J | 1K | C | 3010510 | 00 | SEMICONDUCTOR DEVICE | H |
| | | | R 1J | 1V | 1W | 02 | | | DIODE GERMANIUM EM 120 | |
| | | | R 1X | 10H | 10J | 03 | | | | |
| | | | R 10K | 10S | 10T | 04 | | | | |
| | | | R 10J | 10V | | 05 | | | | |
| A | | 6 | 1C | 1G | 1L | C | 3010883 | 48 | RESISTOR FXD FILM - | H * |
| | | | R 1N | | | 02 | | | 1000 OHMS 1/2WATT +- 2% | |
| B | | 7 | 1E | 1R | 10E | C | 3010883 | 53 | RESISTOR FXD FILM - | H |
| | | | R 10P | | | 02 | | | 1600 OHMS 1/2WATT +- 2% | |

DETACHED LIST OF MATERIAL

POSITIVE AMPLIFIER (1) ASSY

TYPE B4842

UNIVAC

OCT. 22'66

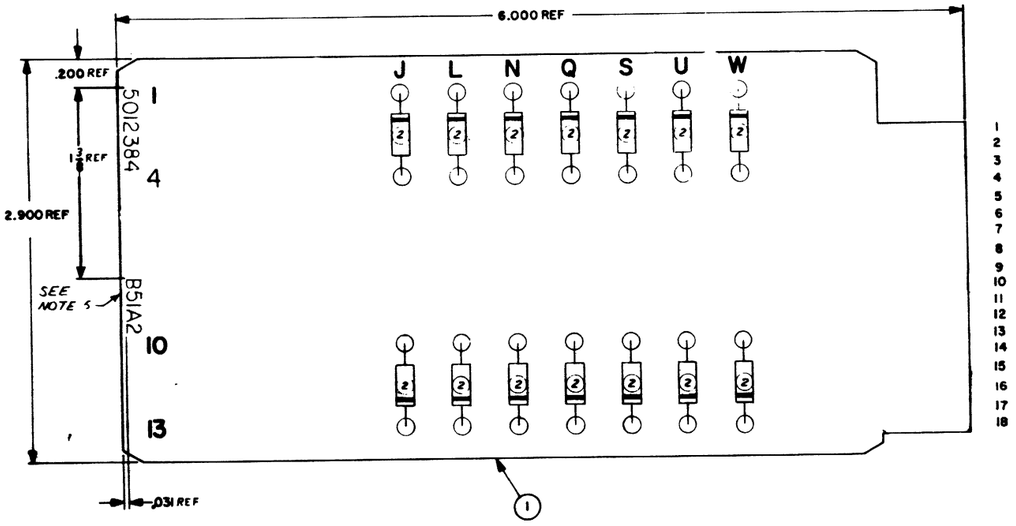
LM 5012378 F *

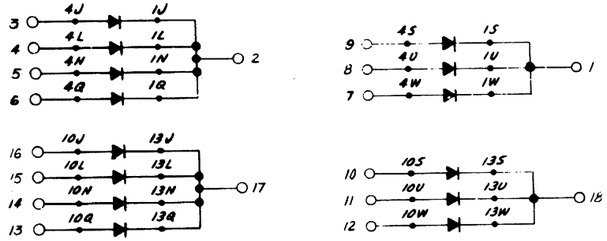
1

E 2

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | 10 | | | | D | | | | |
| | | | A | | | C | | | | |
| B | | 8 | 1F | 1S | 10F | C | 3010883 | 69 | RESISTOR FXD FILM - | H |
| | | | R 100 | | | 02 | | | 7500 OHMS 1/2WATT +- 2% | |
| A | | 9 | 1B | 1P | 10C | C | 3010883 | 76 | RESISTOR FXD FILM - | H |
| | | | R 10M | | | 02 | | | 15000 OHMS 1/2WATT +- 2% | |
| A | | 10 | 6C | 6H | 6M | C | 4908000 | 01 | TRANSISTOR PNP GERMANIUM | H |
| | | | R 6R | | | 02 | | | HAS LEAD SPREADER | |
| | | A01 | - - - - - - - - - - - - | | | D | 5014316 | 00 | CIRCUIT PACKAGE TEST SHEET | C |
| | | | | | | | | | TYPE B4B | |
| | | S01 | - - - - - - - - - - - - | | | | DS00410 | | PRINTED CKT SPEC FOR ASSY OF | H |
| | | S02 | - - - - - - - - - - - - | | | A | CS01985 | 00 | GENERAL 1004 TEST SPEC | C |
| | | Z01 | - - - - - - - - - - - - | | | | C 1382 | 01 | L/M PIC E REV HISTORY | |
| | | Z02 | - - - - - - - - - - - - | | | | C 6565 | 12 | L/M E PIC E REV HISTORY | |
| | | Z03 | - - - - - - - - - - - - | | | | H 18062 | 04 | L/M F PIC E REV HISTORY | * |

M. Hanley



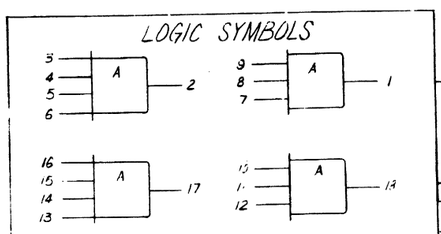

NOTES:
1) STRIPE ON DIODE BODY DENOTES CATHODE END.
◯ INDICATES FIND NO.
<> INDICATES DESIGNATIONS STAMPED ON COMPONENT FOR REF ONLY.
( ) INDICATES DESIGNATIONS FOR REF. ONLY & SHALL NOT BE STAMPED.
2)

3) MINIMUM SPACE FOR THIS BOARD IS 1/2 INCH.
4) ASSEMBLE PER (S01)
5) TEST PER (S02) & (RC1)
6) TYPE NUMBER, ASSEMBLY NUMBER AND LOCATION NUMBERS & LETTERS SHALL BE STAMPED OR SCREENED WITH BLACK INK. CHARACTERS TO BE 1/8 INCH HIGH, .016 MIN. LINE WIDTH.

REVISIONS

| SYM | ZONE | E.R. | DESCRIPTION | CHK | DATE | APPROVED |
|---|---|---|---|---|---|---|
| C | | | RELEASED | | 7-31-62 | |
| D | | | | | 8-15-62 | |
| E | | S5321 | SEE E.R. | | 11-1-62 | |

LOGIC SYMBOLS




| QTY REQD | FIND | REF DES | CODE IDENT | CHNG SYMBOL | PART OR IDENTIFYING NO | NOMENCLATURE OR DESCRIPTION |
|---|---|---|---|---|---|---|
| 14 | 2 | 1J,1L 1N,1Q 1S,1U 1W,10J 10L,10N 10Q,10S 10U,10W | | | ~~5010810~~ | DIODE - EM 20 |
| 1 | 1 | | | C | 5012383-00 | BOARD PRINTED WIRING |

LIST OF MATERIAL

FOR MATERIAL REQUIREMENTS SEE DETACHED LIST OF MATERIAL
LM 5012384

REVISION LETTER IN LWR RH CORNER APPLIES TO PICTORIAL SHT (B)
LM REV LETTER CONTROLS DOCUMENT

| | | | |
|---|---|---|---|
| 00 | 5012348-00 | TYPE 201 | |
| 00 | 5012397-00 | TYPE 2009 | |
| 0C | 5012346-00 | TYPE 2C10 | |
| QTY REQ | NEXT ASSY | EQUIPMENT | |

APPLICATION

UNLESS OTHERWISE SPECIFIED
ALL DIMENSIONS IN INCHES
TOLERANCE ON FRACTIONS ±, DECIMALS ±, ANGLES ±
DECIMAL HOLE DIAMETER TOLERANCE
0 THRU 250 ± .003 — .002; 251 THRU 500 ± .005 — .003; 501 & LARGER ± .010 — .005
THREADS EXT CL 2A, INT CL 2B
MATERIAL
FINISH

LAYOUT Stuart Kurz 3/20/62
DRAFTSMAN KARL W. OSH 4-9-62
CHECKER S. Cutler 4-7-62
ENGINEER PROD R. TODD R Todd 8/25/62
APPROVAL
CCT DES

CLASS A
Remington Rand Univac
DIVISION OF SPERRY RAND CORPORATION

TITLE
GATE 1 (TYPE 1)
ASSEMBLY
TYPE B51

CODE IDENT NO. | SIZE D | DWG NO. 5012384
SCALE 2/1 | SHEET 1 OF 1

DO NOT SCALE THIS PRINT

ORIGINAL

THIS DOCUMENT CONTAINS CONFIDENTIAL INFORMATION OF THE REMINGTON RAND DIVISION OF SPERRY RAND CORPORATION AND IS FURNISHED PURSUANT TO THE FOLLOWING INSTRUMENT
OR THE UNDERSTANDING THAT THIS DOCUMENT AND THE INFORMATION CONTAIN MAY NOT BE DEALT WITH IN ANY MANNER EXCEPT FOR THE PURPOSES OF THAT INSTRUMENT OR AS OTHERWISE PERMITTED IN WRITING BY THE REMINGTON RAND DIVISION OF SPERRY RAND CORPORATION

5012384

# DETACHED LIST OF MATERIAL

GATE 1 (TYPE 1) ASSY

TYPE 851~~12~~A

UNIVAC

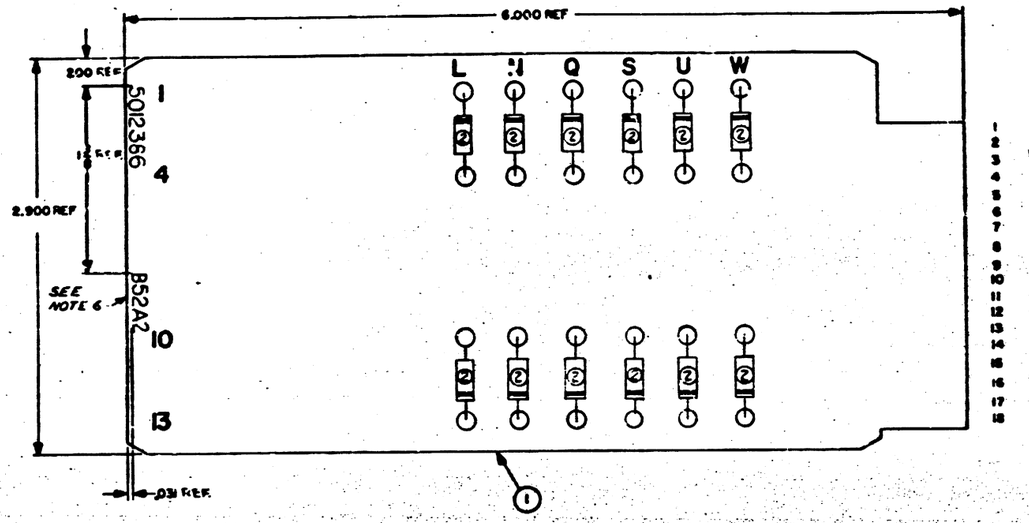
LM | DWG NO 5012384 | REV E | SHEET NO 2

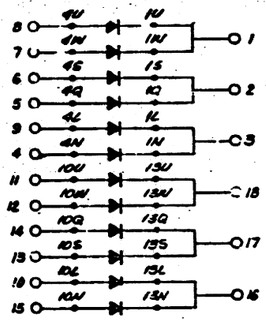
CODE IDENT NO | REV E | SHEET 1

| | | | | | | | | | NOMENCLATURE OR DESCRIPTION | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | PT NO. 5012384 00 THRU 00 | |
| 1 | | 1 | - - - | - - - | - - - | - - - | C | 5012383 00 | PRINTED WIRING BD HOLE | C |
| | | | | | | | | | LOCATION 851 | |
| 14 | | 2 | 1J | 1L | 1N | | C | 3010810 00 | SEMICONDUCTOR DEVICE | H |
| | | R | 1Q | 1S | 1U | 02 | | | DIODE GERMANIUM EM 120 | |
| | | R | 1# | 10J | 10L | 03 | | | | |
| | | R | 10N | 10Q | 10S | 04 | | | | |
| | | R | 10U | 10# | | 05 | | | | |
| | | R01 | - - - | - - - | - - - | - - - | | 5014316 00 | MISSING DRAWING NO. | * |
| | | S01 | - - - | - - - | - - - | - - - | | 0S00410 | PRINTED CKT SPEC FOR ASSY OF | H * |
| | | S02 | - - - | - - - | - - - | - - - | A | CSC1985 00 | GENERAL 1004 TEST SPEC | C * |
| | | Z01 | - - - | - - - | - - - | - - - | | C 1382 01 | L/M PIC D REV HISTORY | |
| | | Z02 | - - - | - - - | - - - | - - - | | C 6565 12 | L/M D PIC D REV HISTORY | |
| | Δ | Z03 | - - - | - - - | - - - | - - - | | C 8502 01 | M. HORBY JUL 1 1965 L/M E PIC E REV HISTORY | |

NOTE - CHANGE SHEET S MADE ON ITEMS Δ

SHEET 1 OF 1

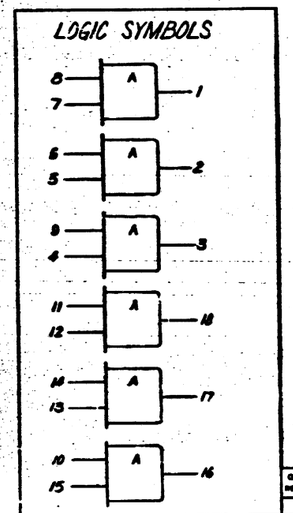



NOTES:
1) STRIPE ON DIODE BODY DENOTES CATHODE END.
○ INDICATES FIND NO.
<> INDICATES DESIGNATIONS STAMPED ON COMPONENT FOR REF ONLY.
( ) INDICATES DESIGNATIONS FOR REF. ONLY & SHALL NOT BE STAMPED.
2)

3) MINIMUM SPACE FOR THIS BOARD IS 1/2 INCH.
4) ASSEMBLE PER (SD1)
5) TEST PER (SC1) & (ZU1)
6) TYPE NUMBER, ASSEMBLY NUMBER AND LOCATION NUMBERS & LETTERS SHALL BE STAMPED OR SCREENED WITH BLACK INK. CHARACTERS TO BE 1/8 INCH HIGH, .016 MIN. LINE WIDTH.

LOGIC SYMBOLS




FOR MATERIAL REQUIREMENTS SEE DETACHED LIST OF MATERIAL
LM 5012386
REVISION LETTER IN LWR RH CORNER APPLIES TO PICTORIAL SHT (S)
LM REV LETTER CONTROLS DOCUMENT

LIST OF MATERIAL

| QTY REQD | FIND | REF DES | CODE IDENT | CHG TYPE | PART OR IDENTIFYING NO | NOMENCLATURE OR DESCRIPTION |
|---|---|---|---|---|---|---|

| REVISIONS | | | | | | |
|---|---|---|---|---|---|---|
| LTR | ZONE | ECR | DESCRIPTION | BY | DATE | APPROVED |
| | | | PHOTO-ARTWORK ADDED, NOTES ADDED, ETC. PER ECR 6-8596-1 | | 12-8-67 | JJS |

| | | |
|---|---|---|
| 00 | 5012348-66 | TYPE 2011 |
| 00 | 5012348-80 | TYPE 2009 |
| 00 | 5012348-90 | TYPE 2010 |
| 00 | PART ASSY | EQUIPMENT |
| | APPLICATION | |

UNLESS OTHERWISE SPECIFIED
ALL DIMENSIONS IN INCHES
TOLERANCE ON FRACTIONS ± | DEC PLACES ± | ANGLES ±
DECIMAL HOLE DIAMETER TOLERANCE
0 THRU .250 ± .003 | .251 THRU .500 ± .005 | .501 & LARGER ± .010
.XXX ± .002 | .XXX ± .003 | .XXX ± .005
FINISHES EXT CL 2A, INT CL 2B
MATERIAL

| | | |
|---|---|---|
| LAYOUT | STUART KOHN | 11/21/62 |
| DRAFTSMAN | KARL W. OCH | 11/11/62 |
| CHECKER | C. Erta Lan | 6-6-68 |
| ENGINEER PROD | R. TODD | 6/20/62 |
| APPLICATION | J.D. STEHLER | 6/20/62 |
| CCT DES | D. NEDDENRIEP | |

CLASS A
Remington Rand Univac
DIVISION OF SPERRY RAND CORPORATION
TITLE
GATE 1B (TYPE 1)
ASSEMBLY
TYPE B52
CODE IDENT NO
SIZE D
DWG NO. 5012386
SCALE 2/1
SHEET 1 OF 1

BT462 Ø
DO NOT SCALE THIS PRINT

--5012386

DETACHED LIST OF MATERIAL

TITLE OF DRAWING FROM WHICH DETACHED: GATE 1B (TYPE 1) ASSY

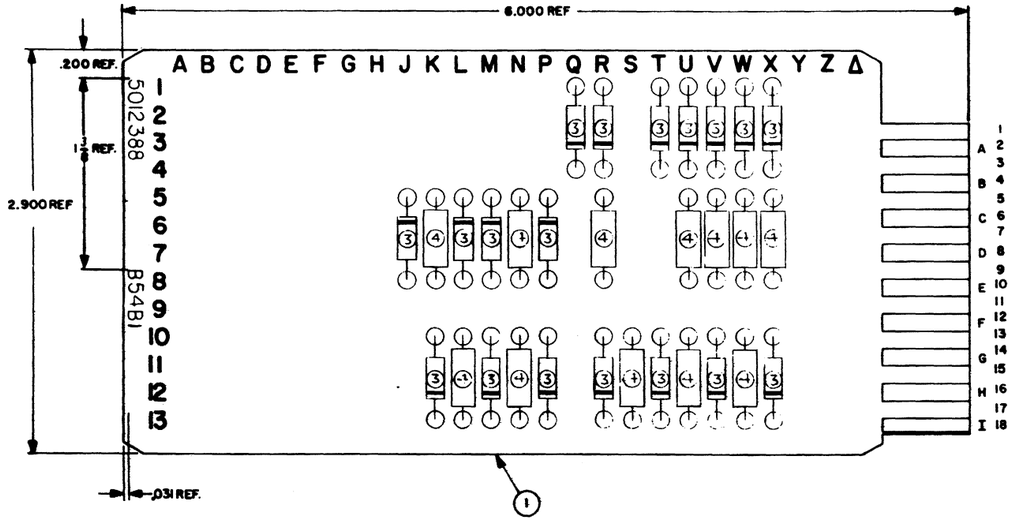
TYPE 85243A

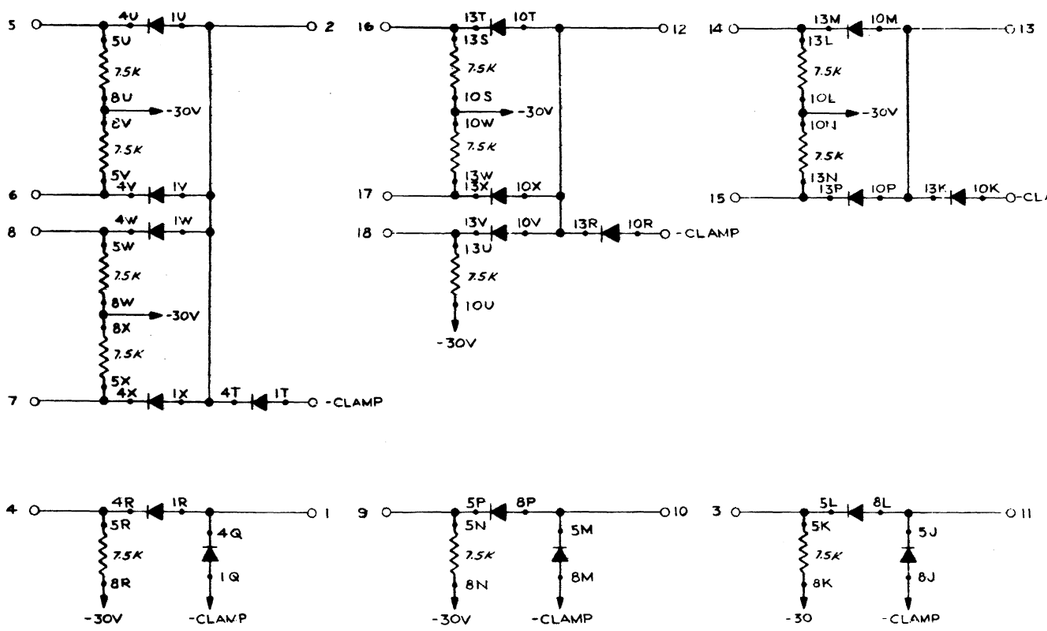
UNIVAC

LM | DWG NO 5012386 | REV 08 | LIST OF MATERIAL IDENTIFICATION | ISSUE NO 1 | CODE IDENT NO | DWG REV 08 | SHEET 1

| | | REFERENCE DES | | |

| REVISIONS | | | | | | |
|---|---|---|---|---|---|---|
| SYM | ZONE | ECR | DESCRIPTION | BY | DATE | APPROVED |
| C | — | [illegible] | RELEASED | [illegible] | 9-7-62 | [illegible] |
| D | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| E | C-4 | C12326 | REF. NOTE #6 | [illegible] | [illegible] | [illegible] |
| F | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |




**NOTES:**

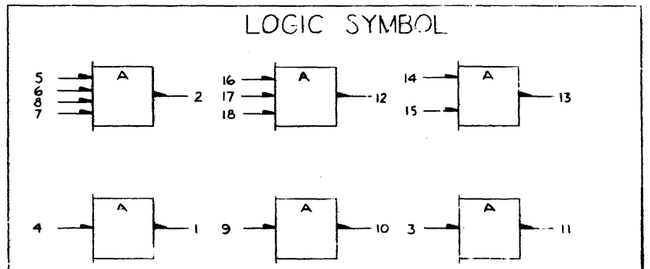
1) STRIPE ON DIODE BODY DENOTES CATHODE END.
◯ INDICATES FIND NO.
<> INDICATES DESIGNATIONS STAMPED ON COMPONENT FOR REF ONLY.
( ) INDICATES DESIGNATIONS FOR REF. ONLY & SHALL NOT BE STAMPED.
2) UNLESS OTHERWISE DESIGNATED

| | | | |
|---|---|---|---|
| CONTACT | A | SHALL BE | ⏚ |
| CONTACT | B | SHALL BE | SPARE |
| CONTACT | C | SHALL BE → | -8V |
| CONTACTS | D & E | SHALL BE → | -30V |
| CONTACT | F | SHALL BE → | - CLAMP |
| CONTACT | G | SHALL BE → | +20V |
| CONTACT | H | SHALL BE → | SPARE |
| CONTACT | I | SHALL BE | ⏚ |

3) MINIMUM SPACE FOR THIS BOARD IS 1/2 INCH
4) ASSEMBLE PER (501)
5) AXIAL LEAD COMPONENTS, EXCEPT DIODES, TO BE MOUNTED [illegible] FROM THE BOARD
6) TEST PER (506)

FOR MATERIAL REQUIREMENTS SEE DETACHED LIST OF MATERIAL
LM 5012388
REVISION LETTER IN LWR RH CORNER APPLIES TO PICTORIAL SHT (S)
LM REV LETTER CONTROLS DOCUMENT

## LOGIC SYMBOL




| | | | |
|---|---|---|---|
| 00 | 5012348 00 | TYPE 2011 | |
| 00 | 5012347 00 | TYPE 2009 | |
| 00 | SCH2346 00 | TYPE 2010 | |
| DASH NO. | NEXT ASSY | EQUIPMENT | |
| | APPLICATION | | |

UNLESS OTHERWISE SPECIFIED
ALL DIMENSIONS IN INCHES
TOLERANCE ON FRACTIONS ± | DECIMALS ± | ANGLES ±
DECIMAL HOLE DIAMETER TOLERANCE
0 THRU .250 +.003 -.002 | .251 THRU .500 +.005 -.003 | .501 & LARGER +.010 -.005
THREADS EXT CL 2A, INT CL 2B
MATERIAL
FINISH

| | | |
|---|---|---|
| LAYOUT | S. KOVAR | DATE 4-18-62 |
| DRAFTSMAN | MIKE MAKRIKIS | 1-25- |
| CHECKER | [illegible] | 4-30-62 |
| ENGINEER APPD | R. TODD R. Todd | 8/28/62 |
| APPROVAL | | |
| CCT DES IS PROPRIETARY | D.O.N. [illegible] | |

CLASS A
Remington Rand Univac
DIVISION OF SPERRY RAND CORPORATION
TITLE
GATE 3 (TYPE 3) ASSEMBLY TYPE B54B1
CODE IDENT NO.
SIZE D
DWG NO. 5012388
SCALE 2/1
SHEET OF
DO NOT SCALE THIS PRINT

THIS DRAWING CONTAINS CONFIDENTIAL INFORMATION OF THE REMINGTON RAND DIVISION OF SPERRY RAND CORPORATION AND IS FURNISHED PURSUANT TO THE FOLLOWING INSTRUMENT
BY THE ACCEPTANCE OF THIS DRAWING AND THE INFORMATION CONTAINED THEREIN, YOU AGREE THAT IT WILL NOT BE REPRODUCED, DISCLOSED OR USED IN WHOLE OR IN PART WITHOUT THE WRITTEN PERMISSION OF THE REMINGTON RAND DIVISION OF SPERRY RAND CORPORATION

DWG NO 5012388

**DETACHED LIST OF MATERIAL**

TITLE OF DRAWING FROM WHICH DETACHED: GATE 3 (TYPE 3) ASSY

TYPE 85481

UNIVAC

DWG NO: LM — 5012388 — REV F

LIST OF MATERIAL IDENTIFICATION — ISSUE NO 1

CODE IDENT NO — P.I.C REV F — SHEET 1

DWG PROJ CODE 10 — UNIT OF MEASURE — DWG SIZE D

MFG PROJ CODE — L/M CLASS A — DCL C

LIST OF MATERIAL

| QTY REQD | MFG QTY | MFG U/M | FIND | REFERENCE DES A | REFERENCE DES B | REFERENCE DES C | CODE IDENT | S I Z E | IDENTIFICATION INFO PART OR IDENT NO DWG NO | IDENTIFICATION INFO DASH | NOMENCLATURE OR DESCRIPTION | P C L |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | - 4 | | | | | | | | PT NO. 5012388 00 THRU 00 | |
| 1 | | | 1 | - - - | - - - | - - - | - - | C | 5012387 | 00 | PRINTED WIRING BD HOLE LOCATION | C |
| 18 | | | 3 | 1Q | 1R | 1T | | C | 3010810 | 00 | SEMICONDUCTOR DEVICE | H |
| | | | R | 1U | 1V | 1W | 02 | | | | DIODE GERMANIUM: EM 120 | |
| | | | R | 1X | 5J | 5L | 03 | | | | | |
| | | | R | 5M | 5P | 10K | 04 | | | | | |
| | | | R | 10M | 10P | 10R | 05 | | | | | |
| | | | R | 10T | 10V | 10X | 06 | | | | | |
| 12 | | | 4 | 5K | 5N | 5R | | C | 3010883 | 69 | RESISTOR FXD FILM - | H |
| | | | R | 5U | 5V | 5W | 02 | | | | 7500 OHMS 1/2WATT +- 2% | |
| | | | R | 5X | 10L | 10N | 03 | | | | | |
| | | | R | 10S | 10U | 10W | 04 | | | | | |
| | | | ~~R01~~ S02 | - - - | - - - | - - - | - - | | 5014321 | 00 | MISSING DRAWING NO. | |
| | | | S01 | - - - | - - - | - - - | - - | | 5000410 | | PRINTED CKT SPEC FOR ASSY OF | H |
| Δ | | | ~~S02~~ | - - - | - - - | - - - | - - | A | ~~C501005~~ | ~~00~~ | ~~GENERAL 1004 TEST SPEC~~ | C |

FORM SA 1648 V (REV 6/63)

**DETACHED LIST OF MATERIAL**

TITLE OF DRAWING FROM WHICH DETACHED: GATE 3 (TYPE 3) ASSY

TYPE 85481

UNIVAC

DWG NO: LM — 5012388 — REV F

LIST OF MATERIAL IDENTIFICATION — ISSUE NO 1

CODE IDENT NO — P.I.C REV F — SHEET 2

DWG PROJ CODE 10 — UNIT OF MEASURE — DWG SIZE D

MFG PROJ CODE — L/M CLASS A — DCL C

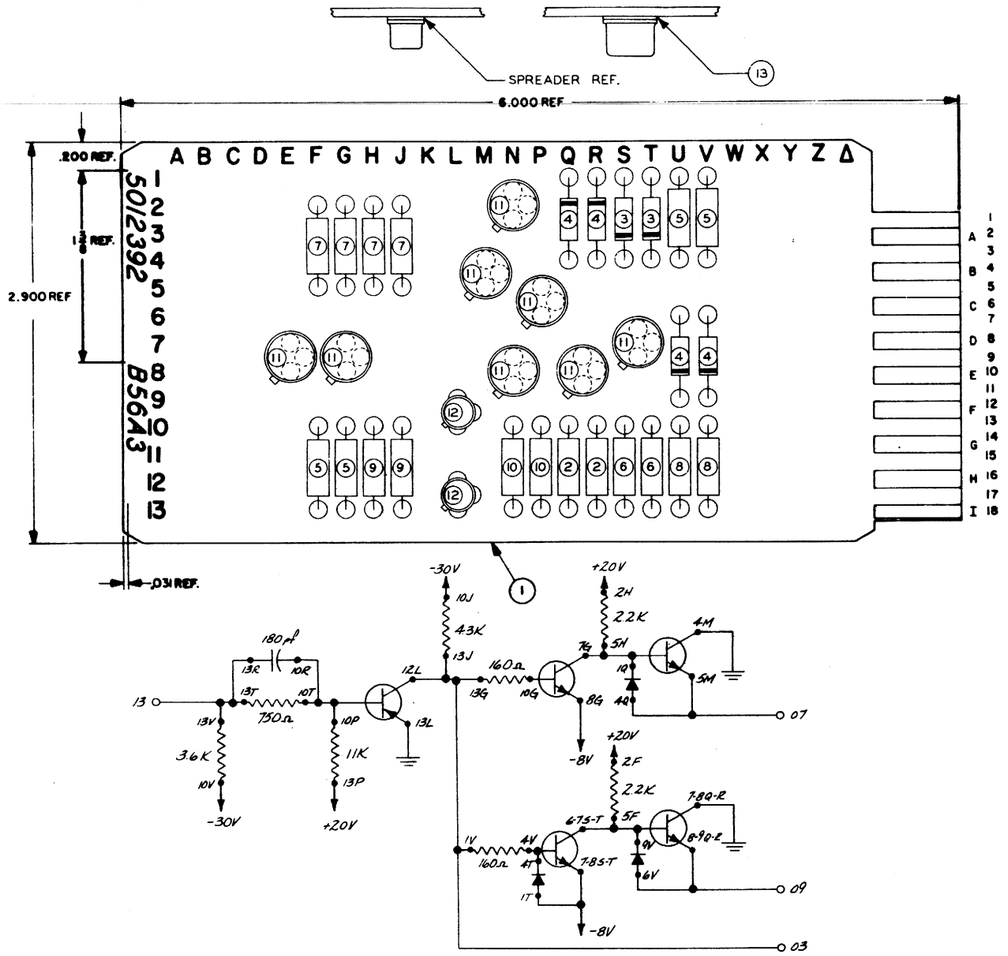
LIST OF MATERIAL

| QTY REQD | MFG QTY | MFG U/M | FIND | REFERENCE DES A | REFERENCE DES B | REFERENCE DES C | CODE IDENT | S I Z E | IDENTIFICATION INFO PART OR IDENT NO DWG NO | IDENTIFICATION INFO DASH | NOMENCLATURE OR DESCRIPTION | P C L |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Z01 | - - - | - - - | - - - | - - | | C 1382 | 02 | L/M F PIC E REV HISTORY | |
| | | | | | | | | | C6985 | 01 | | |
| Δ | | | Z02 | - - - | - - - | - - - | - - | | ~~C 6985~~ | ~~12~~ | L/M ~~E~~ F PIC ~~E~~ F REV HISTORY | |
| | | | | | | | | | | | Harley 4-15-65 | |
| | | | | | | | | | | | CKD [illegible] 7-22-65 | |

NOTE: CHANGE SHEETS MADE ON ITEMS Δ

SHEET 2 OF 2

FORM SA 1648 V (REV. 6/63)

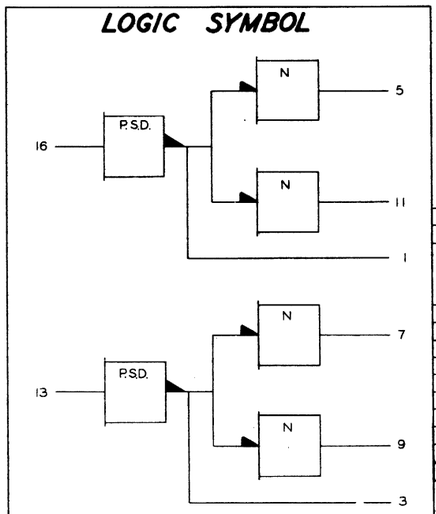



**NOTES:**

1) STRIPE ON DIODE BODY DENOTES CATHODE END.
   ◯ INDICATES FIND NO.
   <> INDICATES DESIGNATIONS STAMPED ON COMPONENT FOR REF ONLY.
   ( ) INDICATES DESIGNATIONS FOR REF. ONLY & SHALL NOT BE STAMPED.
2) UNLESS OTHERWISE DESIGNATED
   - CONTACT A SHALL BE ⏚
   - CONTACT B SHALL BE SPARE
   - CONTACT C SHALL BE → -8V
   - CONTACTS D & E SHALL BE → -30V
   - CONTACT F SHALL BE → SPARE
   - CONTACT G SHALL BE → +20V
   - CONTACT H SHALL BE → SPARE
   - CONTACT I SHALL BE ⏚
3) MINIMUM SPACE FOR THIS BOARD IS 1/2 INCH
4) **ASSEMBLE PER DS 410.**
5) AXIAL LEAD COMPONENTS, EXCEPT DIODES, TO BE MOUNTED .010 MINIMUM FROM THE BOARD.
6) TEST PER CS1985 AND 5014322.
7) USE OF GLASS BEAD ATTACHED TO TO-5 TRANSISTOR WILL BE AN ACCEPTABLE ALTERNATE SPACING DEVICE WHEN USED WITH MACHINE INSERTION ONLY.

| REVISIONS | | | | | | |
|---|---|---|---|---|---|---|
| SYM | ZONE | E/R | DESCRIPTION | BY | DATE | APPROVED |
| 1 | | C6782-1 | REDRAWN & REVISED LAST REV D - CRAFTSMAN | [illegible] | [illegible] | [illegible] |
| [illegible] | | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |

## LOGIC SYMBOL




| QTY REQD | FIND | REF DES | DWG SIZE | PART OR IDENTIFYING NO | NOMENCLATURE OR DESCRIPTION |
|---|---|---|---|---|---|
| 8 | 13 | | – | 4000813-00 | INSULATOR PLATE PHENOLIC |
| 2 | 12 | 9L, 12L | – | 4908000-01 | TRANSISTOR |
| 8 | 11 | 1-2N, 4M, 5P, 6-75-T, 7E, 7G, 7-8N, 7-80-R | – | 4912957-00 | TRANSISTOR - 2N2195 |
| 2 | 10 | 10N, 10P | – | 3010883-73 | RESISTOR ½W 11K 2% |
| 2 | 9 | 10H, 10J | – | 3010883-63 | RESISTOR ½W 4.3K 2% |
| 2 | 8 | 10U, 10V | – | 3010883-61 | RESISTOR ½W 3.6K 2% |
| 4 | 7 | 2F, 2G, 2H, 2J | – | 3010883-56 | RESISTOR ½W 2.2K 2% |
| 2 | 6 | 10S, 10T | – | 3010883-45 | RESISTOR ½W 750Ω 2% |
| 4 | 5 | 1U, 1V, 10F, 10G | – | 3010883-29 | RESISTOR ½W 160Ω 2% |
| 4 | 4 | 1Q, 1R, 6V, 6U | C | 5018743-00 | DIODE - IN458 |
| 2 | 3 | 1S, 1T | – | 3010810-00 | DIODE - EM120 |
| 2 | 2 | 10Q, 10R | – | 2018687-15 | CAPACITOR 180pf 100V 20% |
| 1 | 1 | | C | 5012391-00 | BOARD PRINTED WIRING |

LIST OF MATERIAL

SEE DETACHED L/M

PART NO. 5012392-00

| | | |
|---|---|---|
| 00 | 5012347-00 | 2009 |
| 00 | 5012348-00 | 2011 |
| REV | NEXT ASSY | EQUIPMENT |
| | APPLICATION | |

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES
FRACTIONS ± — DECIMALS ± — ANGLES ± —
DECIMAL HOLE DIAMETER TOLERANCE
THRU .250: .003 / .002
.251 THRU .500: .005 / .003
.501 & LARGER: .010 / .005
THREADS EXT CL 2A, INT CL 2B
MATERIAL
FINISH

| | | DATE |
|---|---|---|
| LAYOUT | R STEELE | 6-27-64 |
| DRAFTSMAN | R STEELE | 6-27-64 |
| CHECKER | | |
| ENGINEER | [illegible] | [illegible] |
| APPROVAL | | |
| CCT. DES | [illegible] | |

CLASS A

Remington Rand Univac
DIVISION OF SPERRY RAND CORPORATION

TITLE **PUNCH SHIFT DRIVER ASSEMBLY TYPE B56A3**

CODE IDENT NO. — SIZE D — DWG NO 5012392

SCALE 8/1 — SHEET 1 OF 1

DO NOT SCALE THIS PRINT

DWG NO 5012392

60-0116-8 REV. 1

**DETACHED LIST OF MATERIAL**

TITLE OF DRAWING FROM WHICH DETACHED: PUNCH SHIFT DRIVER ASSEMBLY TYPE B56A3

ENG. PROJ. CODE: 09 | UNIT OF MEASURE: | DWG SIZE: D

MFG. PROJ. CODE: | U/M CLASS: A | DCL: C(N)

UNIVAC

LM | DWG NO: 5012392 | REV: E

LIST OF MATERIAL IDENTIFICATION | ISSUE NO: 1

CODE IDENT NO. | SHEET 1 OF 2

LIST OF MATERIAL

| QTY. REQD. | MFG. QTY. | MFG. U/M | FIND | REFERENCE DES A | REFERENCE DES B | REFERENCE DES C | CODE IDENT | SIZE | IDENTIFICATION INFO PART OR IDENT NO. DWG NO. | IDENTIFICATION INFO DASH | NOMENCLATURE OR DESCRIPTION | DCL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | - 4 | | | | | - | - | - | PT Nº. 5012392-00 THRU 00 | |
| 1 | | | 1 | | | | | C | - 5012391 | 00 | BOARD PRINTED WIRING | |
| 2 | | | 2 | | | | | | - 2018687 | 15 | CAPACITOR 180pf 100V ±20% | |
| 2 | | | 3 | | | | | | - 3010810 | 00 | DIODE -EM 120 | |
| 4 | | | 4 | | | | | | - 5018743 | 00 | DIODE -IN458 | |
| 4 | | | 5 | | | | | | - 3010883 | 29 | RESISTOR ½W 160Ω ±2% | |
| 2 | | | 6 | | | | | | - 3010883 | 45 | RESISTOR ½W 750Ω ±2% | |
| 4 | | | 7 | | | | | | - 3010883 | 56 | RESISTOR ½W 2.2K ±2% | |
| 2 | | | 8 | | | | | | - 3010883 | 61 | RESISTOR ½W 3.6K ±2% | |
| 2 | | | 9 | | | | | | - 3010583 | 63 | RESISTOR ½W 4.3K ±2% | |
| 2 | | | 10 | | | | | | - 3010883 | 73 | RESISTOR ½W 11K ±2% | |
| 6 | | | 11 | | | | | | - 4912957 | 00 | TRANSISTOR -2N2195 | |
| 2 | | | 12 | | | | | | - 4908000 | 01 | TRANSISTOR | |
| 8 | | | 13 | | | | | | - 4000813 | 00 | INSULATOR PLATE PHENOLIC | |
| | | | S01 | | | | | DS | 410 | - | PRINTED CIRCUIT SPECIFICATION FOR ASSEMBLY OF | |
| | | | S02 | | | | | CS | 1985 | - | GENERAL TEST SPECIFICATION - 1004 CIRCUIT PACKAGES | |
| | | | S03 | | | | | - | 5014322 | - | CIRCUIT PACKAGE TEST SHEET - TYPE B56 | |

FORM #A 1648 V (REV. 6/63)

**DETACHED LIST OF MATERIAL**

TITLE OF DRAWING FROM WHICH DETACHED: PUNCH SHIFT DRIVER ASSEMBLY TYPE B56A3

ENG. PROJ. CODE: 09 | UNIT OF MEASURE: | DWG. SIZE: D

MFG. PROJ. CODE: | U/M CLASS: A | DCL: C(N)

UNIVAC

LM | DWG. NO. 5012392 | REV. E

LIST OF MATERIAL IDENTIFICATION | ISSUE NO. 1

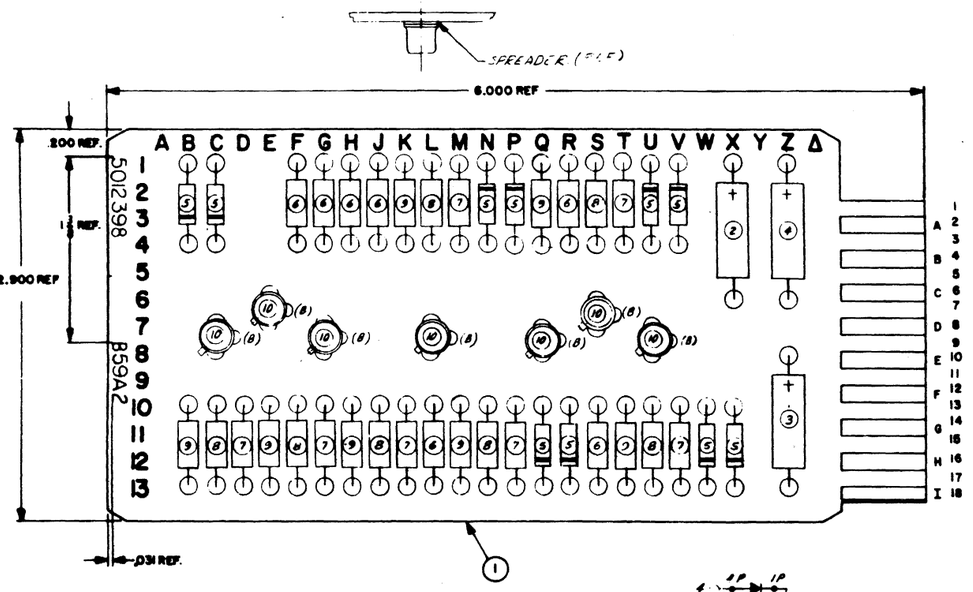
CODE IDENT NO. | SHEET 2 OF 2

LIST OF MATERIAL

| QTY. REQD. | MFG. QTY. | MFG. U/M | FIND | REFERENCE DES A | REFERENCE DES B | REFERENCE DES C | CODE IDENT | SIZE | IDENTIFICATION INFO PART OR IDENT NO. DWG NO. | IDENTIFICATION INFO DASH | NOMENCLATURE OR DESCRIPTION | DCL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Z01 | | | | | | C3647 | 03 | L/M "D" - PIC "D" EIR HISTORY | |
| | | | Z02 | | | | | - | C4782 | 01 | L/M "E" - PIC "E" - EIR HISTORY | |
| | | | | | | | | | | EC | | |

FORM #A 1648 V (REV. 6/63)

| REVISIONS | | | | | | |
|---|---|---|---|---|---|---|
| SYM | ZONE | ECR | DESCRIPTION | BY | DATE | APPROVED |
| D | – | CHR/1 | RELEASED | | 9/7/62 | RT |
| F | | CHR/1 | ADDED NOTE 6 | | 12/26/62 | RT |

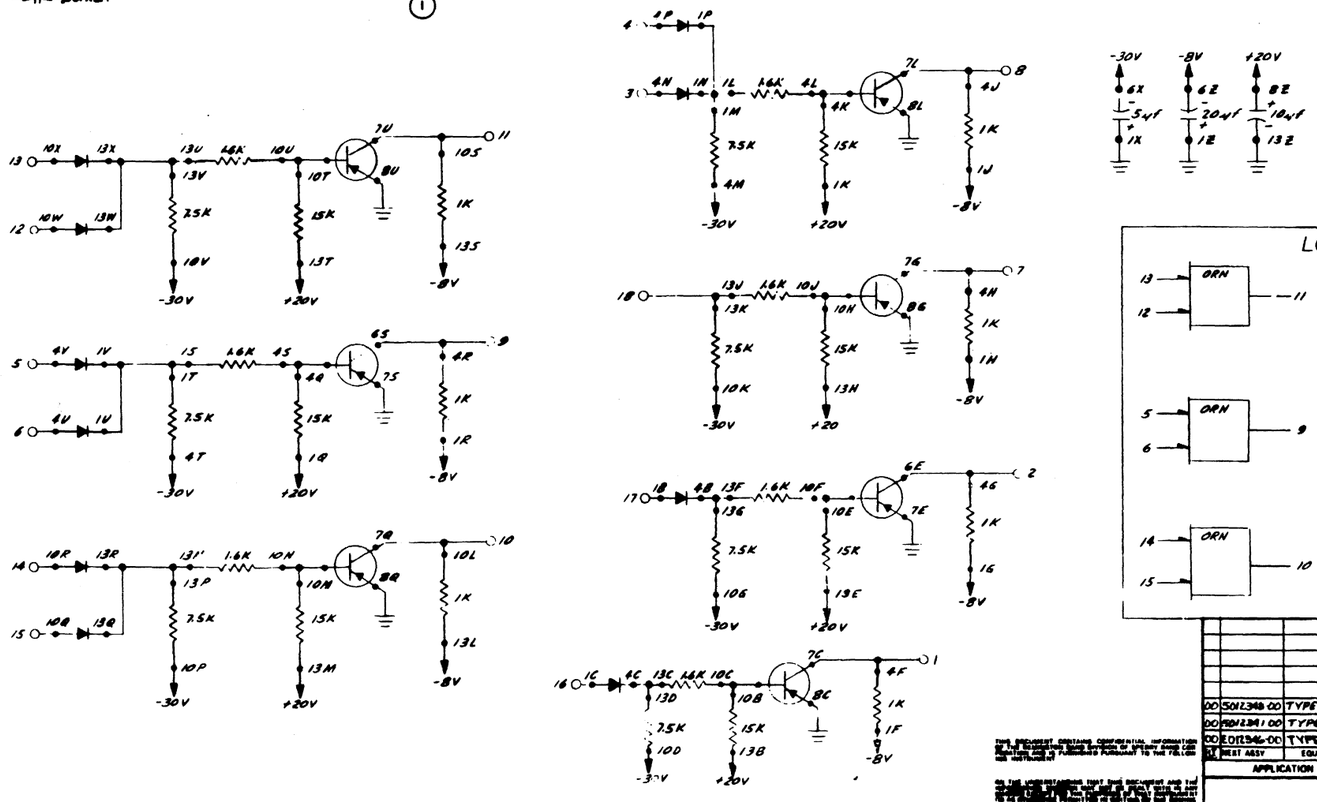



NOTES:

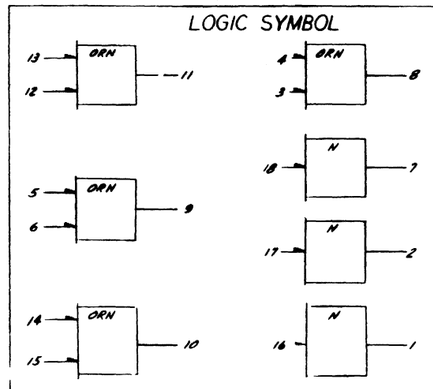
1) STRIPE ON DIODE BODY DENOTES CATHODE END.
   ◯ INDICATES FIND NO.
   <> INDICATES DESIGNATIONS STAMPED ON COMPONENT FOR REF ONLY.
   ( ) INDICATES DESIGNATIONS FOR REF. ONLY & SHALL NOT BE STAMPED.
2) UNLESS OTHERWISE DESIGNATED

| | | | |
|---|---|---|---|
| CONTACT | A | SHALL BE | ⏚ |
| CONTACT | B | SHALL BE | SPARE |
| CONTACT | C | SHALL BE → | -8V |
| CONTACTS | D & E | SHALL BE → | -30V |
| CONTACT | F | SHALL BE → | -20V |
| CONTACT | G | SHALL BE → | +20V |
| CONTACT | H | SHALL BE → | SPARE |
| CONTACT | I | SHALL BE | ⏚ |

3) MINIMUM SPACE FOR THIS BOARD IS 1/2 INCH
4) ASSEMBLE PER DS 410.
5) AXIAL LEAD COMPONENTS, EXCEPT DIODES, TO BE MOUNTED .010 MIN FROM THE BOARD.
6) TEST PER CSI185 & 5014524




LOGIC SYMBOL




| QTY REQD | FIND | REF DES | CODE IDENT | CHNG LTR | PART OR IDENTIFYING NO | NOMENCLATURE OR DESCRIPTION |
|---|---|---|---|---|---|---|
| 7 | 10 | 6S,6S 7G,7G 7L,7A 7U | | | 4908000-01 | TRANSISTOR |
| 7 | 9 | 1K,1Q 10B,10E 10H,10M 10T | | | 3010883-76 | RESISTOR 15K ½W ±2% |
| 7 | 8 | 1L,1S 4K,4F 4N,4M 10U | | | 3010883-53 | RESISTOR 1.6K ½W ±2% |
| 7 | 7 | 1M,1T 10D,10G 10K,10P 10V | | | 3010883-69 | RESISTOR 2.5K ½W ±2% |
| 7 | 6 | 1F,1G 1H,1J 1R,10L 10S | | | 3010691-48 | RESISTOR 1K ½W ±5% |
| 10 | 5 | 4B,4C,4H 4P,4S,4T 4W,10A 10W,10X | | | 3010810 | DIODE-EM120 |
| 1 | 4 | 1Z | | | 2012127-09 | CAPACITOR 20μf, 15V-10%+100% |
| 1 | 3 | 8Z | | | 2012128-01 | CAPACITOR 10μf, 25V, -10%+100% |
| 1 | 2 | 1X | | | 2012129-04 | CAPACITOR 5μf, 50V -10%+100% |
| 1 | 1 | | | C | 5012397-00 | BOARD PRINTED WIRING |

LIST OF MATERIAL

| | | |
|---|---|---|
| 00 | 5012398-00 | TYPE 2011 |
| 00 | 5012341-00 | TYPE 2009 |
| 00 | 5012346-00 | TYPE 2010 |
| REV | NEXT ASSY | EQUIPMENT |
| | APPLICATION | |

UNLESS OTHERWISE SPECIFIED
ALL DIMENSIONS IN INCHES
TOLERANCE ON FRACTIONS ±, DECIMALS ±, ANGLES ±
DECIMAL HOLE DIAMETER TOLERANCE
0 THRU .250 ± .003; .251 THRU .500 ± .005; .501 & LARGER ± .010
.XXX ± .002; .XXXX ± .003
THREADS EXT CL 2A, INT CL 2B
MATERIAL
FINISH

| | | |
|---|---|---|
| LAYOUT | M. Krauss | 9/4/62 |
| DRAFTSMAN | [illegible] | 9-10-62 |
| CHECKER | S. Cavalieri | 9-25-62 |
| ENGINEER APPD | R. Todd | 8/26/62 |
| APPROVAL | [illegible] | 9/4/62 |
| CCT DES | [illegible] | |

CLASS A

Remington Rand Univac
DIVISION OF SPERRY RAND CORPORATION

TITLE
POSITIVE AMPLIFIER (2) ASSEMBLY
TYPE B59A2

CODE IDENT NO. | DWG NO. 5012398 | SIZE D | SCALE 8/1 | SHEET OF

BT4696

DO NOT SCALE THIS PRINT

5012398

DETACHED LIST OF MATERIAL

POSITIVE AMPLIFIER (2) ASSY

TYPE 859A2

UNIVAC

OCT. 22,66

LM 5012398 F

1

E 1

PT NO. 5312398 00 THRU 03

PRINTED WIRING 80 HOLE C

LOCATION

CAPACITOR FXD ELECT AL 50V DC H

5 UF -10% +100%

CAPACITOR FXD ELECT AL 25V DC H

10 UF -10% +100%

CAPACITOR FXD ELECT. AL 15V DC H

20 UF -10% +100%

SEMICONDUCTOR DEVICE H

DIODE GERMANIUM EM 120

RESISTOR FXD FILM - H

1000 OHMS 1/2WATT +- 2%

RESISTOR FXD FILM - H

7500 OHMS 1/2WATT +- 2%

DETACHED LIST OF MATERIAL

POSITIVE AMPLIFIER (2) ASSY

TYPE 859A2

UNIVAC

OCT. 22,66

LM 5012398 F

1

E 2

RESISTOR FXD FILM - H

1500J OHMS 1/2WATT +- 2%

RESISTOR FXD FILM - H

15000 OHMS 1/2WATT +- 2%

TRANSISTOR PNP GERMANIUM H

HAS LEAD SPREADER

CIRCUIT PACKAGE TEST SHEET C

TYPE 859

GENERAL 1004 TEST SPEC C

PRINTED CKT SPEC FOR ASSY 5F H

L/M PIC E REV HISTORY

DETACHED LIST OF MATERIAL

POSITIVE AMPLIFIER (2) ASSY

TYPE 859A2

UNIVAC

OCT. 22,66

LM 5012398 F

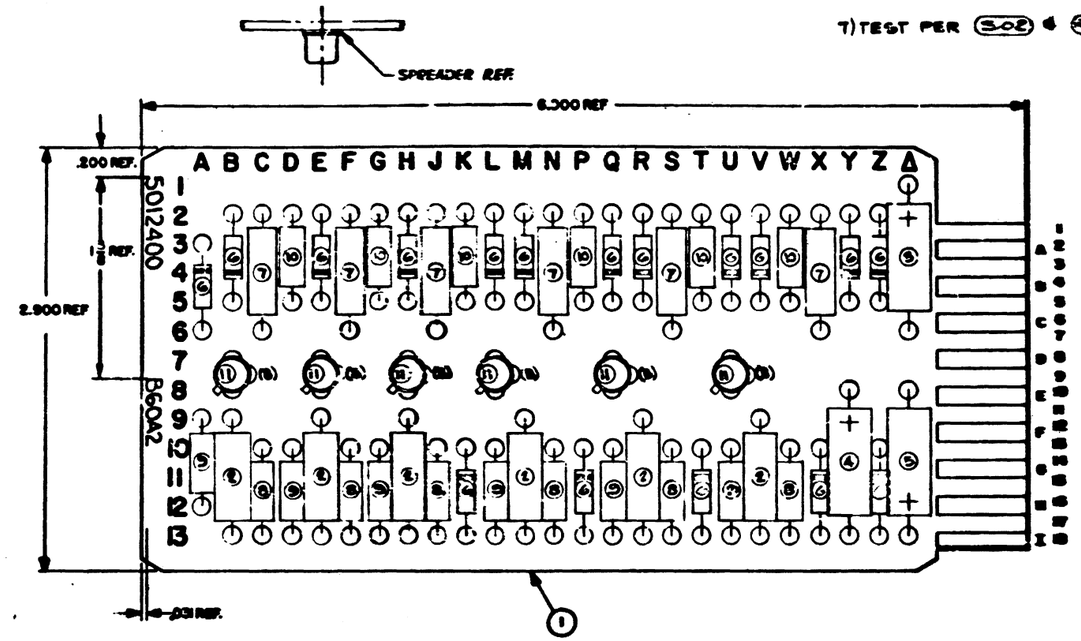
1

E 3

L/M E PIC F REV HISTORY

L/M F PIC G REV HISTORY

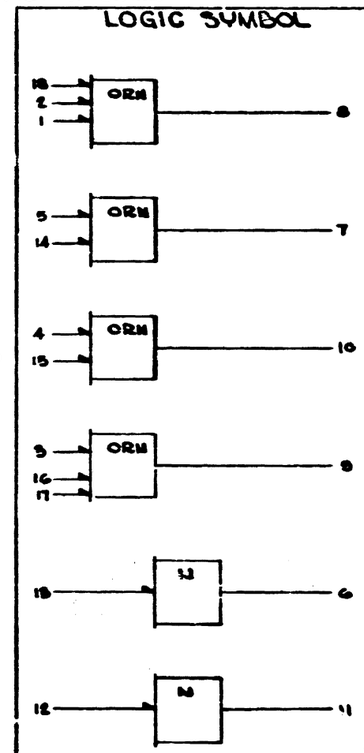
| REVISIONS | | | | | | |
|---|---|---|---|---|---|---|
| SYM | ZONE | ECR | DESCRIPTION | CHK | DATE | APPROVED |
| C | — | [illegible] | RELEASED | | [illegible] | LT |
| D | | [illegible] | ADDED NOTE 7 | | [illegible] | LT |
| D | | [illegible] | REV'D DETACHED L/M | | [illegible] | [illegible] |

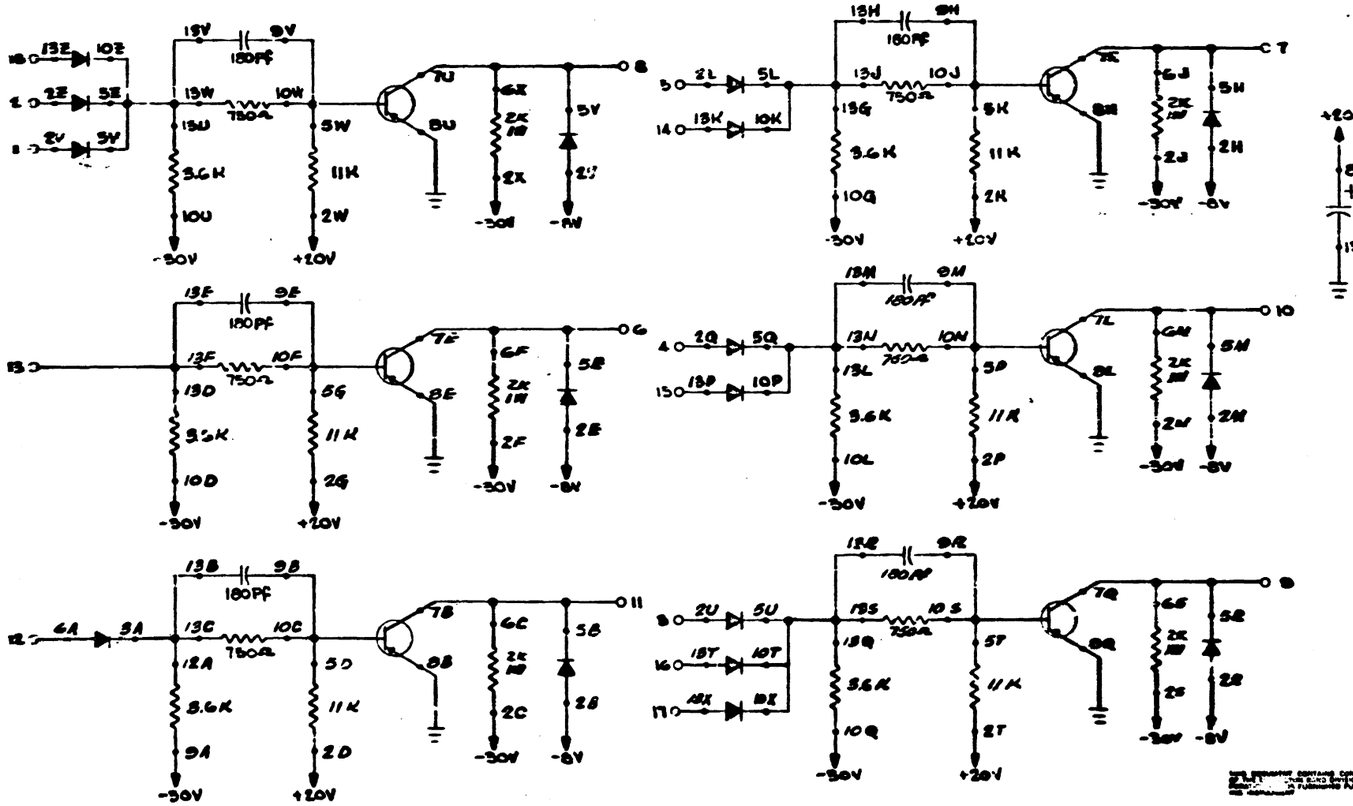



7) TEST PER (502) & (501)

NOTES:
1) STRIPE ON DIODE BODY DENOTES CATHODE END.
○ INDICATES FIND NO.
<> INDICATES DESIGNATIONS STAMPED ON COMPONENT FOR REF ONLY.
( ) INDICATES DESIGNATIONS FOR REF. ONLY & SHALL NOT BE STAMPED.
2) UNLESS OTHERWISE DESIGNATED
CONTACT A SHALL BE ⏚
CONTACT B SHALL BE SPARE
CONTACT C SHALL BE → -8V
CONTACTS D & E SHALL BE → -30V
CONTACT F SHALL BE → -20V
CONTACT G SHALL BE → +20V
CONTACT H SHALL BE → SPARE
CONTACT I SHALL BE ⏚
3) MINIMUM SPACE FOR THIS BOARD IS 1/2 INCH
4) ARE USED PER (501)
5) COMPONENTS AT 2Z, 9A, 10C, 10D, 10F, 10G, 10J, 10L, 10N, 10Q, 10S, 10U, 10W, 10X, & 10Z TO BE INSERTED PRIOR TO COMPONENTS AT 1A, 6V, 8A, 9B, 9E, 9H, 9M, 9R, & 9V.
6) AXIAL LEAD COMPONENTS, EXCEPT DIODES, TO BE MOUNTED .010 MIN FROM THE BOARD.

LOGIC SYMBOL




| QTY REQD | FIND | REF DES | CODE IDENT | PART OR IDENTIFYING NO. | NOMENCLATURE OR DESCRIPTION |
|---|---|---|---|---|---|
| 6 | 11 | TB,TG TH,TL TC,TU | | 4908000-01 | TRANSISTOR |
| 6 | 10 | 4D,2G 2K,2P 2T,2W | | 5010885-73 | RESISTOR 11K ½W±2% |
| 6 | 9 | 9A,10U 10G,10L 10Q,10V | | 5010885-61 | 5.6K,½W,±2% |
| 6 | 8 | 10C,10F 10J,10N 10S,10W | | 5010885-45 | 750Ω ½W,±2% |
| 6 | 7 | 2C,2F 2J,2N 2S,2X | | 5010885-55 | RESISTOR 2K 1W,±5% |
| 17 | 6 | 2B,2E 2H,2L 2M,2Q 2R,2U 2V,2Y 2Z,9A 10K,10P 10T,10X | | 5010810 | DIODE EM 120 |
| 1 | 5 | [illegible] | | 5012100-03 | [illegible] |
| 1 | 4 | [illegible] | | 5012100-01 | [illegible] |
| 1 | 3 | [illegible] | | 5012100-02 | [illegible] |
| 6 | 2 | [illegible] | | 5012122-15 | CAPACITOR [illegible]pf, ±10% |
| 1 | 1 | [illegible] | | [illegible] | [illegible] |

LIST OF MATERIAL

FSCM
MATERIAL REQUIREMENTS SEE DETACHED LIST OF MATERIAL
L/M 5012400
REVISION LETTER IN LWR RH CORNER APPLIES TO PICTORIAL SHT (S) LWR LETTER CONTROLS DOCUMENT

| | | | |
|---|---|---|---|
| CONTRACT NO. | TYPE 2011 | LAYOUT | DATE 7/31/62 |
| JOB NO. | TYPE 2009 | DRAFTSMAN J. [illegible] | 11 |
| CUSTOMER | TYPE 2009 | CHECKER | 4-24 [illegible] |
| NEXT ASSY | EQUIPMENT | ENGINEER [illegible] | 8/24/62 |
| APPLICATION | | APPROVAL | |
| | | CCT DES [illegible] | |

UNLESS OTHERWISE SPECIFIED
ALL DIMENSIONS IN INCHES
TOLERANCE ON: FRACTIONS ±, DECIMALS ±, ANGLES ±
RECOMMENDED HOLE DIAMETER TOLERANCE
THREADS: EXT CL 2A, INT CL 2B
MATERIAL
FINISH

CLASS A

[illegible]

TITLE
DOUBLE POWER AMP (POSITIVE) ASSEMBLY TYPE B60A2

CODE IDENT NO. | SIZE D | DWG NO. 5012400

SCALE [illegible] | SHEET [illegible]

DO NOT SCALE THIS PRINT

5012400

DETACHED LIST OF MATERIAL

DOUBLE POWER AMP (POSITIVE)

ASSEMBLY TYPE 860 A2

UNIVAC

LM 5012400 D

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | NOMENCLATURE OR DESCRIPTION |
| | | | | | | | | | PT NO. 5012400 00 THRU 00 |
| 1 | | 1 | | | | | C | 5012399 00 | PRINTED WIRING BOARD HOLE C |
| | | | | | | | | | LOCATION 860 |
| 6 | | 2 | 9B | 9E | 9H | | C | 2012122 15 | CAPACITOR, FXD,CER TUBULAR 10% H |
| | | | R 9M | 9R | 9V | 02 | | | 180 PF |
| 1 | | 3 | 3DELTA | | | | C | 2012127 09 | CAPACITOR FXD ELECT, AL 15V DC H |
| | | | | | | | | | 20 UF -10% +100% |
| 1 | | 4 | 8Y | | | | C | 2012128 07 | CAPACITOR FXD ELECT AL 25V DC H |
| | | | | | | | | | 10 UF -10% +100% |
| 1 | | 5 | 8DELTA | | | | C | 2012129 04 | CAPACITOR FXD ELECT AL 50V DC H |
| | | | | | | | | | 5 UF -10% +100% |
| 17 | | 6 | 2B | 2E | 2H | | C | 3010810 00 | SEMICONDUCTOR DEVICE H |
| | | | R 2L | 2M | 2Q | 32 | | | DIODE GERMANIUM: EM 120 |
| | | | R 2R | 2U | 2V | 33 | | | |
| | | | R 2Y | 2Z | 3A | 04 | | | |
| | | | R 10K | 10P | 10T | 05 | | | |
| | | | R 13X | 10Z | | 06 | | | |

DETACHED LIST OF MATERIAL

DOUBLE POWER AMP (POSITIVE)

ASSEMBLY TYPE 860 A2

UNIVAC

LM 5012400 D

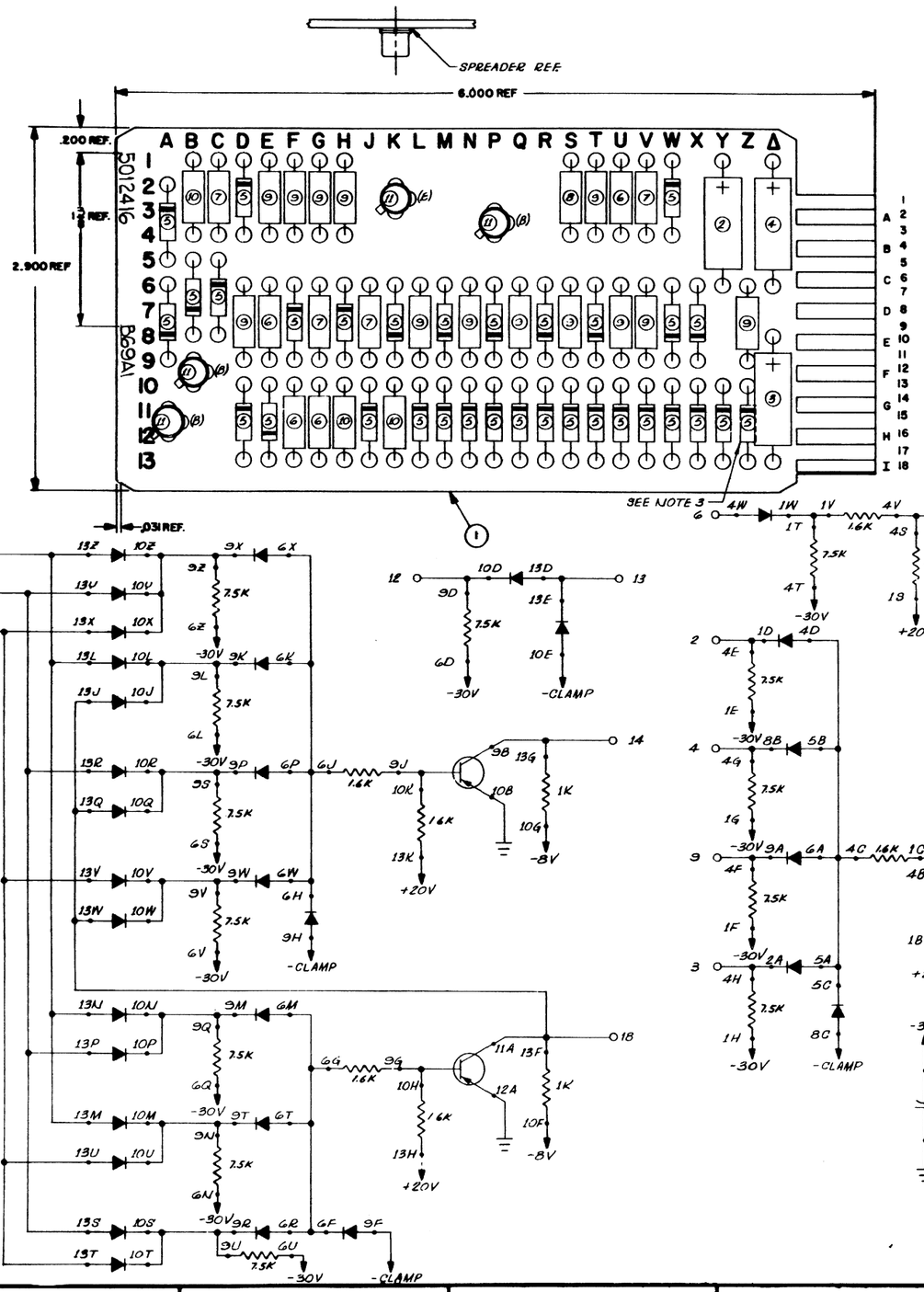
| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | NOMENCLATURE OR DESCRIPTION |
| 6 | | 7 | 2C | 2F | 2J | | C | 3010693 55 | RESISTOR FXD FILM - H |
| | | | R 2N | 2S | 2X | 02 | | | 2300 OHMS 1WATT +- 5% |
| 6 | | 8 | 10C | 10F | 10J | | C | 3010883 45 | RESISTOR FXD FILM - H |
| | | | R 10N | 10S | 10W | 02 | | | 750 OHMS 1/2WATT +- 2% |
| 6 | | 9 | 9A | 10D | 10G | | C | 3010883 61 | RESISTOR FXD FILM - H |
| | | | R [illegible] | 10Q | 10J | 02 | | | 3600 OHMS 1/2WATT +- 2% |
| 6 | | [illegible] | 2D | 2G | 2K | | C | 3010883 73 | RESISTOR FXD FILM - H |
| | | | R 2P | 2T | 2W | 02 | | | 11000 OHMS 1/2WATT +- 2% |
| 6 | | 11 | 7B | 7E | 7H | | C | 4908000 01 | TRANSISTOR PNP GERMANIUM H |
| | | | R 7L | 7Q | 7U | 02 | | | HAS LEAD SPREADER |
| | | | S01 | | | | | D500410 | PRINTED CKT SPEC FOR ASSY OF H |
| | | | Z02 | | | | | C.1.965 | |
| | | | Z01 | | | | | C.10.226 | |
| | | | Z01 | | | | C | 1382 01 | L/M PIC D REV HISTORY |
| | | | Z02 | | | | C | 8365 12 | L/M D PIC B REV HISTORY |

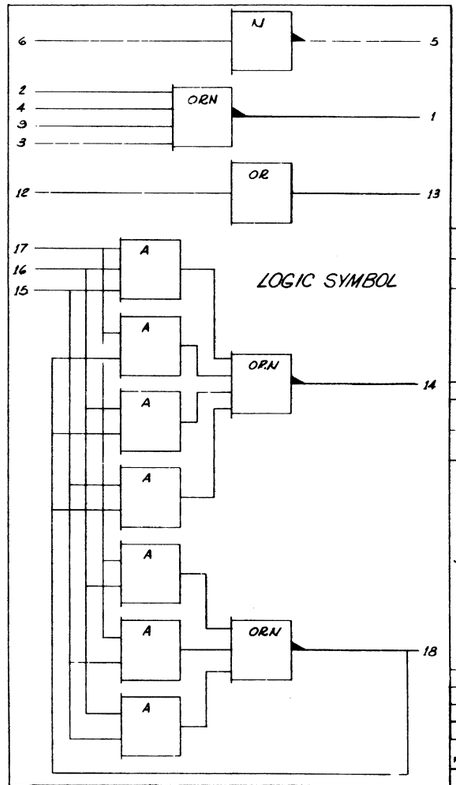
CHK. L. Klanjian 6-23-65

CHKD [illegible] 6-9-65

| REVISIONS | | | | | | |
|---|---|---|---|---|---|---|
| SYM | ZONE | EIR | DESCRIPTION | BY | DATE | APPROVED |
| B | | CONT-4 | RELEASED | | 4-7-62 | RS |
| C | C-2 | CORREC | ADDD NOTE #9 | | 4-17-62 | RS |
| D | | 23308-1 | SEE EIR | | 5-2-62 | RS |

NOTES:
1) STRIPE ON DIODE BODY DENOTES CATHODE END.
( ) INDICATES FIND NO.
< > INDICATES DESIGNATIONS STAMPED ON COMPONENT FOR REF ONLY.
( ) INDICATES DESIGNATIONS FOR REF. ONLY & SHALL NOT BE STAMPED.
2) UNLESS OTHERWISE DESIGNATED
CONTACT A SHALL BE ⏚
CONTACT B SHALL BE SPARE
CONTACT C SHALL BE → -6V
CONTACTS D & E SHALL BE → -30V
CONTACT F SHALL BE → -CLAMP
CONTACT G SHALL BE → +20V
CONTACT H SHALL BE → SPARE
CONTACT I SHALL BE ⏚
3) INSERT COMPONENT 10Z PRIOR TO COMPONENT AT 8Δ.
4) MINIMUM SPACE FOR THIS BOARD IS $\frac{1}{2}$ INCH
5) ASSEMBLE PER DS 410.
6) AXIAL LEAD COMPONENTS EXCEPT DIODES, TO BE MOUNTED .010 MIN FROM THE BOARD.
7) TEST PER CS 1986 & 5014339




| QTY REQD | FIND | REF DES | CODE IDENT | DWG SIZE | PART OR IDENTIFYING NO. | NOMENCLATURE OR DESCRIPTION |
|---|---|---|---|---|---|---|
| 4 | 11 | 2K,3P 9B,11A | | | 4908000-01 | TRANSISTOR |
| 3 | 10 | 18, 10H,10K | | | 3010883-77 | RESISTOR, 16K ½W, ±2% |
| 13 | 9 | 1E,1F 1G,1H 1T,GD GL,GM GQ,GS GU,GV GE, | | | -69 | 7.5K ½W, ±2% |
| 1 | 8 | 15 | | | -76 | 15K ½W, ±2% |
| 4 | 7 | 1C, 1V 6G,6J | | | 3010883-53 | 4.6K ½W, ±2% |
| 4 | 6 | 1U,GE 10F,10G | | | 3010694-48 | RESISTOR,1K, ½W, ±5% |
| 32 | 5 | 1D,1W 2A,5B 5C,GA GF,GN GK,GM GP,GR GT,GW GX,10D 10E,10J 10L,10M 10N,10P 10Q,10R 10S,10T 10U,10V 10W,10X 10Y,10Z | | | 3010810 | DIODE EM120 |
| 1 | 4 | 1Δ | | | 2012123-04 | CAPACITOR,5μf,50V +100 -10 % |
| 1 | 3 | 8Δ | | | 2012128-07 | CAPACITOR,10μf,25V +100 -10 % |
| 1 | 2 | 1V | | | 2012127-09 | CAPACITOR,20μf,15V +100 -10 % |
| 1 | 1 | | | C | 5012415-10 | BOARD PRINTED WIRING |

LIST OF MATERIAL

| | | | | |
|---|---|---|---|---|
| UNLESS OTHERWISE SPECIFIED: ALL DIMENSIONS IN INCHES; TOLERANCE ON FRACTIONS ±, DECIMALS ±, ANGLES ±; DECIMAL HOLE DIAMETER TOLERANCE 0 THRU .250 ±.003, .251 THRU .500 ±.005, .501 & LARGER ±.010 -.002 -.003 -.005; THREADS: EXT CL 2A, INT CL 2B | | | LAYOUT Fred C. Hecht | DATE 4/23/62 |
| | | | DRAFTSMAN J. Barbin | 5-3-62 |
| | | | CHECKER S.Q. Tosh | 4-30-62 |
| | | | ENGINEER PROD R. Todd | 5/8/62 |
| | | | APPROVAL | |
| | | | CCT. DES. D. L. EDDENRIED | D.C.N. 5/22/62 |
| MATERIAL | | | | |
| FINISH | | | | |
| NEXT ASSY 50123446-05 | EQUIPMENT TYPE 2000 | | | |
| APPLICATION | | | | |

CLASS A
Remington Rand Univac
DIVISION OF SPERRY RAND CORPORATION
TITLE
ADDER ASSEMBLY TYPE B69A1
CODE IDENT NO. BT484B
SIZE D
DWG NO. 5012416
SCALE 8/1
SHEET OF
DO NOT SCALE THIS PRINT

THIS DOCUMENT CONTAINS CONFIDENTIAL INFORMATION OF THE REMINGTON RAND DIVISION OF SPERRY RAND CORPORATION AND IS FURNISHED PURSUANT TO THE FOLLOWING AGREEMENT: ALL THE UNDERSTANDINGS THEY HAVE RECEIVED AND THE INFORMATION CONTAINED THEREIN SHALL NOT BE USED WITH IN ANY MANNER DETRIMENTAL TO THE INTERESTS OF THE REMINGTON RAND DIVISION OF SPERRY RAND CORPORATION

DWG. NO. 5012416
Remington Rand

DETACHED LIST OF MATERIAL

ADDER ASSEMBLY TYPE B69A1

UNIVAC

OCT, 22•66

LM 5012416 E

D 1

PT NO. 5012416 00 THRU 00

PRINTED WIRING BOARD HOLE C

LOCATION B49

CAPACITOR FXD ELECT, AL 15V DC H

20 UF -10% +100%

CAPACITOR FXD ELECT AL 25V DC H

10 UF -10% +100%

CAPACITOR FXD ELECT AL 50V DC H

5 UF -10% +100%

SEMICONDUCTOR DEVICE H

DIODE GERMANIUM EM 120

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | S01 | - - - - - - - - - - | | | 3503410 | | | |
| | | S02 | - - - - - - - - - - | | A | 5501985 | 00 | | |
| | | S03 | - - - - - - - - - - | | B | 5014333 | 00 | | |
| | | Z01 | - - - - - - - - - - | | C | 3308 | 01 | | |
| | | Z02 | - - - - - - - - - - | | C | 6565 | 02 | | |
| | | Z03 | - - - - - - - - - - | | H | 18062 | 04 | | |

PRINTED CKT SPEC FOR ASSY OF H

GENERAL 100% TEST SPEC C

CIRCUIT PACKAGE TEST SHEET C

TYPE B69

L/M D PIC 2 REV HISTORY

L/M C PIC 2 REV HISTORY

L/M E PIC 2 REV HISTORY

SHEET 3 OF 3

DETACHED LIST OF MATERIAL

ADDER ASSEMBLY TYPE B69A1

UNIVAC

OCT, 22•66

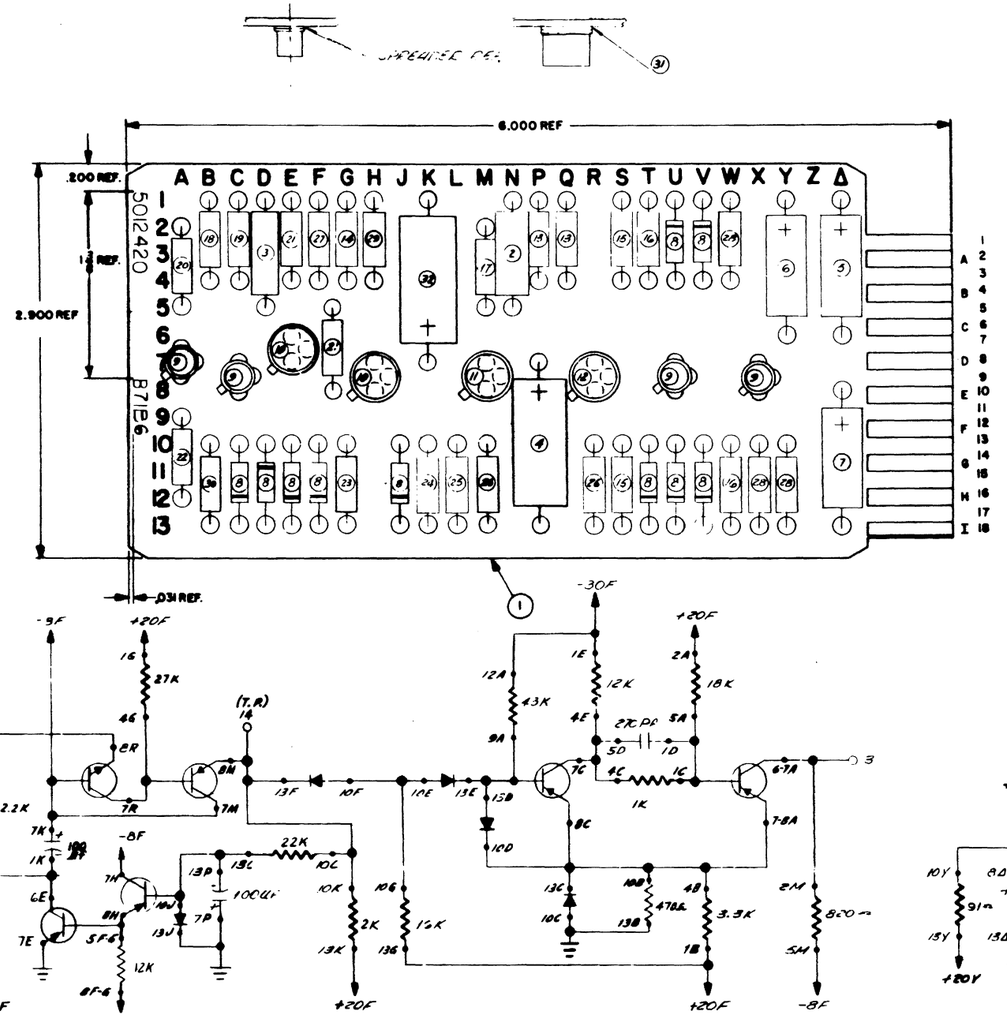
LM 5012416 E

D 2

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | R 10V | 10W | 10X | 10 | | | | |
| | | R 10Y | 10Z | | 11 | | | | |
| 8 | 6 | 1U | 6E | 10F | | C | 3010883 | 48 | RESISTOR FXD FILM = 1300 OHMS 1/2WATT +- 2% H |
| | | R 10G | | | 02 | | | | |
| 8 | 7 | 1C | 1V | 6G | | C | 3010883 | 53 | RESISTOR FXD FILM = 1600 OHMS 1/2WATT +- 2% H |
| | | R 6J | | | 02 | | | | |
| 1 | 8 | 1S | | | | C | 3010883 | 76 | RESISTOR FXD FILM = 15000 OHMS 1/2WATT +- 2% H |
| 13 | 9 | 1E | 1F | 1G | | C | 3010883 | 69 | RESISTOR FXD FILM = 7500 OHMS 1/2WATT +- 2% H |
| | | R 1H | 1T | 6D | 02 | | | | |
| | | R 6L | 6N | 6J | 03 | | | | |
| | | R 6S | 6U | 6V | 04 | | | | |
| | | R 6Z | | | 05 | | | | |
| 3 | 10 | 1B | 10H | 10K | | C | 3010883 | 77 | RESISTOR FXD FILM = 16000 OHMS 1/2WATT +- 2% H |
| 8 | 11 | 2K | 3P | 9B | | C | 4909000 | 01 | TRANSISTOR PNP GERMANIUM HAS LEAD SPREADER H |
| | | R 11A | | | 02 | | | | |

FORM 64168 Y REV 6-63

| REVISIONS | | | | | | |
|---|---|---|---|---|---|---|
| SYM | ZONE | EIR | DESCRIPTION | BY | DATE | APPROVED |
| D | — | CLINT I | RELEASED | | 9-7-62 | |
| E | 116,87 | CH477 | SEE EIR | | 1-1-63 | |
| F | C-4 | C/R0874 | ADD NOTE #6, QTY FIND 26 WAS 1 | | 4/12/63 | |




NOTES:

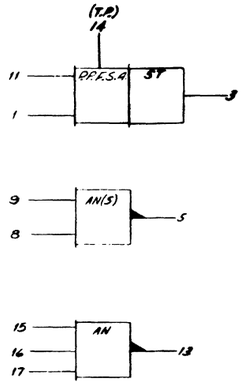
1) STRIPE ON DIODE BODY DENOTES CATHODE END.
   ◯ INDICATES FIND NO.
   <> INDICATES DESIGNATIONS STAMPED ON COMPONENT FOR REF ONLY.
   ( ) INDICATES DESIGNATIONS FOR REF. ONLY & SHALL NOT BE STAMPED.
2) UNLESS OTHERWISE DESIGNATED

| | | | |
|---|---|---|---|
| CONTACT | A | SHALL BE | ⏚ |
| CONTACT | B | SHALL BE | SPARE |
| CONTACT | C | SHALL BE → | -6V |
| CONTACTS | D & E | SHALL BE → | -30V |
| CONTACT | F | SHALL BE → | -20V |
| CONTACT | G | SHALL BE → | +20V |
| CONTACT | H | SHALL BE → | SPARE |
| CONTACT | I | SHALL BE | ⏚ |

3) MINIMUM SPACE FOR THIS BOARD IS 1 INCH.
4) ASSEMBLE PER DS 410.

5) AXIAL LEAD COMPONENTS, EXCEPT DIODES, TO BE MOUNTED .015 MIN FROM THE BOARD.
6) TEST PER CS 1985 & SDM 895

LOGIC SYMBOL




| QTY REQD | FIND | REF DES | CODE IDENT | DWG SIZE | PART OR IDENTIFYING NO | NOMENCLATURE OR DESCRIPTION |
|---|---|---|---|---|---|---|
| 1 | 32 | 1K | | | 2012127-14 | CAPACITOR 100Mf, 15V -10% +100% |
| 4 | 31 | | | | 4900813 | INSULATOR PLATE PHENOLIC |
| 1 | 30 | 10B | | | 30100B3-40 | RESISTOR 470Ω ½W ±5% |
| 1 | 29 | 1N | | | 3010631-56 | 2.2K ½W ±5% |
| 3 | 28 | 1A,1B,1D | | | 30100B3-29 | 91Ω ½W ±5% |
| 1 | 27 | 1F | | | -72 | 10K |
| 2 | 26 | 1M,1R | | | -76 | 15K |
| 1 | 25 | 1CL | | | -80 | 22K |
| 1 | 24 | 1CK | | | -55 | 2.0K |
| 1 | 23 | 1C6 | | | -77 | 16K |
| 1 | 22 | 9A | | | -87 | 43K |
| 2 | 21 | 1E,5F-6 | | | -74 | 12K |
| 1 | 20 | 2A | | | -78 | 18K |
| 1 | 19 | 1C | | | -93 | 1K |
| 1 | 18 | 1B | | | -60 | 3.3K |
| 1 | 17 | 2M | | | -96 | 820Ω |
| 2 | 16 | 17,10W | | | -69 | 7.5K |
| 2 | 15 | 15,10S | | | -53 | 1.6K |
| 1 | 14 | 1K | | | 30100B3-82 | 27K ± 2% |
| 2 | 13 | 1P,1Q | | | 30100G1-48 | RESISTOR 1K ½W ±5% |
| 1 | 12 | 7R | | | 4907975 | TRANSISTOR |
| 1 | 11 | 7M | | | 4912961 | |
| 2 | 10 | 6E,7N | | | 4907976 | |
| 4 | 3 | 6-7A,7C 7P,7X | | | 4908000-01 | TRANSISTOR |
| 10 | 8 | 1A,1V 10C,10D 10E,10F 10J,10T 10U,10V | | | 3010810 | DIODE - EM120 |
| 1 | 7 | 8A | | | 2012129-07 | CAPACITOR 10 Mf 25V -10% +100% |
| 1 | 6 | 1V | | | 2012127-09 | 20Mf 15V |
| 1 | 5 | 1A | | | 2012129-04 | 5Mf 50V |
| 1 | 4 | 7P | | | 2012124-14 | 100 Mf 3V -10% +150% |
| 1 | 3 | 1D | | | 2012122-17 | 270 PF 100V ±10% |
| 1 | 2 | 1N | | | 2012122-24 | CAPACITOR 1000 PF 100V ±10% |
| 1 | 1 | | | C | 5012419-00 | BOARD PRINTED WIRING |

LIST OF MATERIAL

| | | |
|---|---|---|
| CK | 2012348-00 | TYPE 2011 |
| CC | 5012341-00 | TYPE 2005 |
| CC | 5012346-00 | TYPE 2010 |
| NEXT ASSY | | EQUIPMENT |
| APPLICATION | | |

UNLESS OTHERWISE SPECIFIED
ALL DIMENSIONS IN INCHES
TOLERANCE ON FRACTIONS ±, DECIMALS ±, ANGLES ±
DECIMAL HOLE DIAMETER TOLERANCE
0 THRU .250 ±.003 ±.002; .251 THRU .500 ±.005 ±.003; .501 & LARGER ±.010 ±.005
THREADS EXT CL 2A, INT CL 2B
MATERIAL
FINISH

| | | |
|---|---|---|
| LAYOUT | M. KARLA | DATE 4-25-62 |
| DRAFTSMAN | D. PICARDI | 4-25-62 |
| CHECKER | S. [illegible] | 4-27-62 |
| ENGINEER PROG | R. TODD | 5/3/62 |
| APPROVAL | | 5/10/63 |
| ECO DES APPROVED | E. SEWELL | 5/10/63 |

CLASS A
Remington Rand Univac
DIVISION OF SPERRY RAND CORPORATION

TITLE
PRINTER PAPER FEED SPROCKET AMPLIFER ASSEMBLY TYPE B71B6

CODE IDENT NO. | SIZE D | DWG NO. 5012420
SCALE 8/1 | SHEET OF

5012420

THIS DOCUMENT CONTAINS CONFIDENTIAL INFORMATION OF THE REMINGTON RAND DIVISION OF SPERRY RAND CORPORATION AND IS FURNISHED PURSUANT TO THE FOLLOWING AGREEMENT:
ON THE UNDERSTANDING THAT THIS DOCUMENT AND THE INFORMATION CONTAINED THEREIN SHALL BE HELD IN CONFIDENCE AND SHALL NOT BE REPRODUCED IN WHOLE OR IN PART NOR DISCLOSED TO OTHERS WITHOUT THE PRIOR WRITTEN CONSENT OF THE REMINGTON RAND DIVISION OF SPERRY RAND CORPORATION.

B7481A

DO NOT SCALE THIS PRINT

DETACHED LIST OF MATERIAL

PRINTER PAPER FEED SPROCKET

AMPLIFER ASSY TYPE 87186

UNIVAC

LM 5012420 G

OCT. 22166

| QTY REQ | REFERENCE DES | | | CODE IDENT | PART OR IDENTIFYING NO | DATE | NOMENCLATURE OR DESCRIPTION | |
|---|---|---|---|---|---|---|---|---|
| | A | B | C | | | | | |
| | | | | | | | PT NO. 5012420 00 THRU 00 | |
| 1 | 1 | | | C | 5012419 | 00 | PRINTED WIRING BOARD HOLE LOCATION B71 | C |
| 1 | 2 | 1N | | C | 2012122 | 24 | CAPACITOR, FXD, CER TUBULAR 10% 1000 PF | H |
| 1 | 3 | 1D | | C | 2012123 | 17 | CAPACITOR, FXD, CER TUBULAR 10% 270 PF | H |
| 1 | 4 | 7P | | C | 2012124 | 16 | CAPACITOR FXD ELECT AL 3V DC 100 UF -10% +100% | H |
| 1 | 5 | (1DELT A) | | C | 2012129 | 04 | CAPACITOR FXD ELECT AL 50V DC 5 UF -10% +100% | H |
| 1 | 6 | 1Y | | C | 2012127 | 09 | CAPACITOR FXD ELECT, AL 15V DC 20 UF -10% +100% | H |
| 1 | 7 | (8DELT A) | | C | 2012128 | 07 | CAPACITOR FXD ELECT AL 25V DC 10 UF -10% +100% | H |
| 10 | 8 | 1U | 1V | C | 3010316 | 00 | SEMICONDUCTOR DEVICE DIODE GERMANIUM EM 120 | H |
| | R 10D | 10E | 10F | | | 02 | | |
| | R 10J | 10T | 10U | | | 03 | | |
| | R 10V | | | | | 04 | | |
| 8 | 9 | 6-7A | 7C | 7U | C | 4908000 | 01 | TRANSISTOR PNP GERMANIUM HAS LEAD SPREADER | H |
| | R 7A | | | | | 02 | | |
| 2 | 10 | 6E | 7H | | C | 4907976 | 00 | TRANSISTOR - PNP, GERMANIUM, SWITCHING | A |
| 1 | 11 | 7M | | | A | 4912961 | 00 | TRANSISTOR - PNP, GERMANIUM SWITCHING | C |
| 1 | 12 | 7R | | | C | 4907975 | 00 | TRANSISTOR, PNP, GERMANIUM SWITCHING | B |
| | 13 | 1P | 1Q | | C | 3010883 | 48 | RESISTOR FXD FILM 1000 OHMS 1/2WATT +- 2% | H |
| 1 | 14 | 1G | | | C | 3010883 | 62 | RESISTOR FXD FILM 27000 OHMS 1/2WATT +- 2% | H |
| 2 | 15 | 1S | 10S | | C | 3010883 | 53 | RESISTOR FXD FILM 1800 OHMS 1/2WATT +- 2% | H |
| 2 | 16 | 1T | 10R | | C | 3010883 | 69 | RESISTOR FXD FILM 7500 OHMS 1/2WATT +- 2% | H |

DETACHED LIST OF MATERIAL

PRINTER PAPER FEED SPROCKET

AMPLIFER ASSY TYPE 87186

UNIVAC

LM 5012420 G

OCT. 22166

| QTY REQ | REFERENCE DES | | | CODE IDENT | PART OR IDENTIFYING NO | DATE | NOMENCLATURE OR DESCRIPTION | |
|---|---|---|---|---|---|---|---|---|
| | A | B | C | | | | | |
| 1 | 17 | 2M | | C | 3010883 | 46 | RESISTOR FXD FILM 820 OHMS 1/2WATT +- 2% | H |
| 1 | 18 | 1B | | C | 3010883 | 60 | RESISTOR FXD FILM 3300 OHMS 1/2WATT +- 2% | H |
| 1 | 19 | 1C | | C | 3010883 | 48 | RESISTOR FXD FILM 1000 OHMS 1/2WATT +- 2% | H |
| 1 | 20 | 2A | | C | 3010883 | 78 | RESISTOR FXD FILM 18000 OHMS 1/2WATT +- 2% | H |
| 2 | 21 | 1E | 5F-6 | C | 3010883 | 74 | RESISTOR FXD FILM 12000 OHMS 1/2WATT +- 2% | H |
| 2 | 22 | 9A | | C | 3010883 | 87 | RESISTOR FXD FILM 43000 OHMS 1/2WATT +- 2% | H |
| 1 | 23 | 10G | | C | 3010883 | 77 | RESISTOR FXD FILM 16000 OHMS 1/2WATT +- 2% | H |
| 1 | 24 | 10K | | C | 3010883 | 55 | RESISTOR FXD FILM 2000 OHMS 1/2WATT +- 2% | H |
| 1 | 25 | 10L | | C | 3010883 | 30 | RESISTOR FXD FILM 22000 OHMS 1/2WATT +- 2% | H |

DETACHED LIST OF MATERIAL

PRINTER PAPER FEED SPROCKET

AMPLIFER ASSY TYPE 87186

UNIVAC

LM 5012420 G

OCT. 22166

| QTY REQ | REFERENCE DES | | | CODE IDENT | PART OR IDENTIFYING NO | DATE | NOMENCLATURE OR DESCRIPTION | |
|---|---|---|---|---|---|---|---|---|
| | A | B | C | | | | | |
| 2 | 26 | 10Y | 10R | C | 3010883 | 76 | RESISTOR FXD FILM 15000 OHMS 1/2WATT +- 2% | H |
| 1 | 27 | 1F | | C | 3010883 | 72 | RESISTOR FXD FILM 13000 OHMS 1/2WATT +- 2% | H |
| 3 | 28 | 1H | 10X | 10Y | C | 3010883 | 23 | RESISTOR FXD FILM 91 OHMS 1/2WATT +- 2% | H |
| 1 | 29 | 1H | | C | 3010883 | 56 | RESISTOR FXD FILM 2200 OHMS 1/2WATT +- 2% | H |
| 1 | 30 | 10B | | C | 3010883 | 40 | RESISTOR FXD FILM 470 OHMS 1/2WATT +- 2% | H |
| 8 | 31 | - - - | - - - | - - - | C | 4000813 | 00 | STANDOFF, TRANSISTOR | A |
| 1 | 32 | 1K | | C | 2012127 | 14 | CAPACITOR FXD ELECT, AL 15V DC 100 UF -10% +100% | H |
| R01 | - - - | - - - | - - - | - - - | D | 5016335 | 00 | CIRCUIT PACKAGE TEST SHEET TYPE 871 | C |

# DETACHED LIST OF MATERIAL

TITLE OF DRAWING FROM WHICH DETACHED

PRINTER PAPER FEED SPROCKET

AMPLIFER ASSY TYPE 87186

ENG REL CODE 10 | UNIT OF MEASURE | DWG SIZE D | MFG PLAN CODE | LM CLASS A | DCL C

UNIVAC

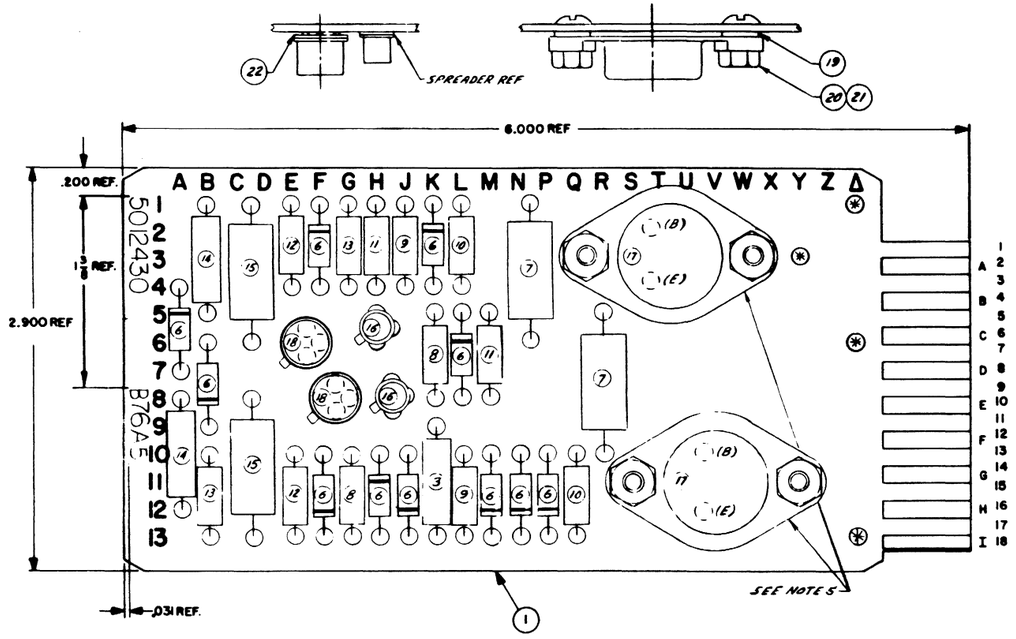
DIVISION OF SPERRY RAND CORPORATION

OCT. 22 66 LIST OF MATERIAL

LM | DWG NO 5012420 | REV G | SUPERSEDES DWG NO | SHEET NO 1 | CODE IDENT NO | P.C. REV F | SHEET 5

| QTY REQD | MFG QTY | MFG L/M | FIND | REFERENCE DES A | REFERENCE DES B | REFERENCE DES C | CODE IDENT | IDENTIFICATION INFO PART OR IDENT NO | IDENTIFICATION INFO DWG NO | IDENTIFICATION INFO DASH | NOMENCLATURE OR DESCRIPTION | DCL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | S01 | - - - | - - - | - - - | - - | | DS00410 | | PRINTED CKT SPEC FOR ASSY OF | H |
| | | | S02 | - - - | - - - | - - - | - - | A | CS01985 | 00 | GENERAL 1004 TEST SPEC | C |
| | | | Z01 | - - - | - - - | - - - | - - | | C 1382 | 02 | L/M PIC F REV HISTORY | |
| | | | Z02 | - - - | - - - | - - - | - - | | C 6565 | 12 | L/M F PIC F REV HISTORY | |
| | | | Z03 | - - - | - - - | - - - | - - | | H 18062 | 04 | L/M G PIC F REV HISTORY | |

M. C. Harley




NOTES:

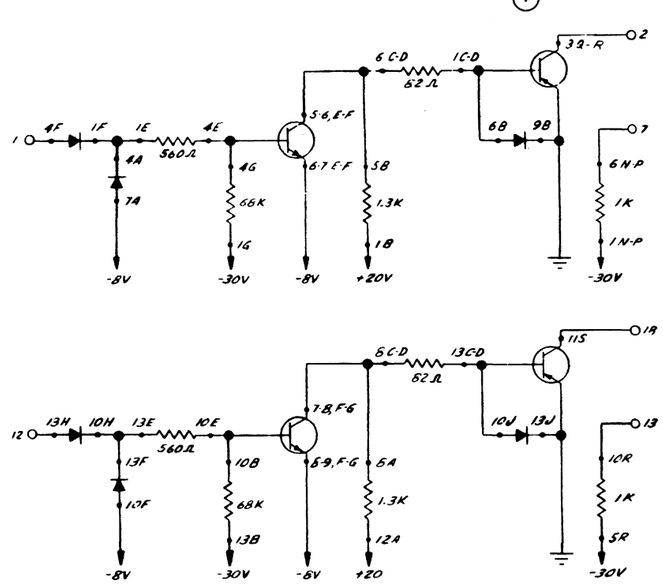
1) STRIPE ON DIODE BODY DENOTES CATHODE END.
○ INDICATES FIND NO.
<> INDICATES DESIGNATIONS STAMPED ON COMPONENT FOR REF ONLY.
( ) INDICATES DESIGNATIONS FOR REF. ONLY & SHALL NOT BE STAMPED.

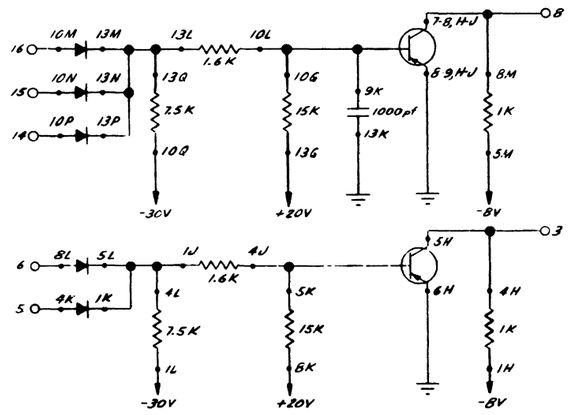
2) UNLESS OTHERWISE DESIGNATED

| | | | |
|---|---|---|---|
| CONTACT | A | SHALL BE | ⏚ |
| CONTACT | B | SHALL BE | SPARE |
| CONTACT | C | SHALL BE → | -8V |
| CONTACTS | D & E | SHALL BE → | -30V |
| CONTACT | F | SHALL BE → | -20V |
| CONTACT | G | SHALL BE → | +20V |
| CONTACT | H | SHALL BE → | SPARE |
| CONTACT | I | SHALL BE | ⏚ |

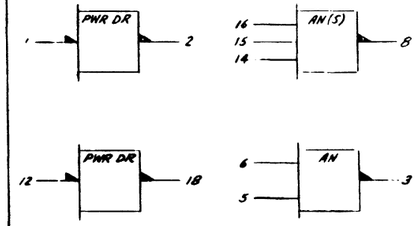
3) MINIMUM SPACE FOR THIS BOARD IS 1 INCH
4) ASSEMBLE PER (S01)
5) TRANSISTOR LEADS SHALL NOT BE CLINCHED, EXPOSE SCREW HEADS DURING SOLDERING PROCESS TO ASSURE ELECTRIAL CONTINUITY TO CIRCUITRY.
6) AXIAL COMPONENTS, EXCEPT DIODES, TO BE MOUNTED .010 MIN FROM THE BOARD
* 7) INTERFACE CONNECTION REQUIRED, TO BE PROVIDED BY MANUFACTURING (4 PLACES)
8) TEST PER (S02)
9) USE OF GLASS BEAD ATTACHED TO TO-5 TRANSISTOR WILL BE AN ACCEPTABLE ALTERNATE SPACING DEVICE WHEN USED WITH MACHINE INSERTION ONLY.

| REVISIONS | | | | | | |
|---|---|---|---|---|---|---|
| SYM | ZONE | EIR | DESCRIPTION | CHG | DATE | APPROVED |
| F | | CHNG | RELEASED | | 9 2 62 | |
| G | B2 | C1967 | FIND (20) WAS 4V12516-03 | | | |
| H | | 23051 | SEE EIR | | | |
| | | | NOTE 8 | | 2 63 | |
| K | B-4C | 2641 | NOTE 9 | | 2 63 | |
| | | 6985 | | | | |




## LOGIC SYMBOLS




FOR MATERIAL REQUIREMENTS SEE DETACHED LIST OF MATERIAL
LM 5012430
REVISION LETTER IN LWR RH CORNER APPLIES TO PICTORIAL SHT 1S1
LM REV LETTER CONTROLS DOCUMENT

| | | |
|---|---|---|
| 00 | 3611201 | 0600 |
| C | 5012346 20 | TYPE 2011 |
| | 5012-38 10 | TYPE 2009 |
| DC | SC1234-00 | TYPE 2010 |
| NEXT ASSY | EQUIPMENT | |
| APPLICATION | | |

THIS DOCUMENT CONTAINS CONFIDENTIAL INFORMATION OF THE REMINGTON RAND DIVISION OF SPERRY RAND CORPORATION AND IS FURNISHED PURSUANT TO THE FOLLOWING AGREEMENT

OR THE UNDERSTANDING THAT THIS DOCUMENT AND THE INFORMATION THEREIN MAY NOT BE DEALT WITH IN ANY MANNER DETRIMENTAL TO THE INTERESTS OF THIS CORPORATION OR ITS SUBSIDIARY OR AFFILIATED COMPANIES OR IN VIOLATION OF THE REMINGTON RAND DIVISION OF SPERRY RAND CORPORATION

UNLESS OTHERWISE SPECIFIED
ALL DIMENSIONS IN INCHES
TOLERANCE ON FRACTIONS ± | DECIMALS ± | ANGLES ±
DECIMAL HOLE DIAMETER TOLERANCE
0 THRU 250 -.003 -.002 | 251 THRU 500 -.005 -.003 | 501 & LARGER -.010 -.005
THREADS EXT CL 2A, INT CL 2B
MATERIAL
FINISH

| | |
|---|---|
| LAYOUT | KARL OCH |
| DRAFTSMAN | BILL CHICKVARA |
| CHECKER | |
| ENGINEER | FRED |
| APPROVAL | |
| CCT DES | STEVENS |
| DATE | 6 14-63 |

CLASS A

Remington Rand Univac
DIVISION OF SPERRY RAND CORPORATION

TITLE
POWER DRIVER AND DIFFERENTIATOR AMPLIFIER ASSEMBLY TYPE B76A5

SCALE 2/1 | SIZE D | DWG NO. 5012430 | SHEET 1 OF 1

DO NOT SCALE THIS PRINT

DWG NO 5012430

DETACHED LIST OF MATERIAL

FOR DRIVER AND DIFFERENTIATOR AMPLIFIER ASSY TYPE F76A5

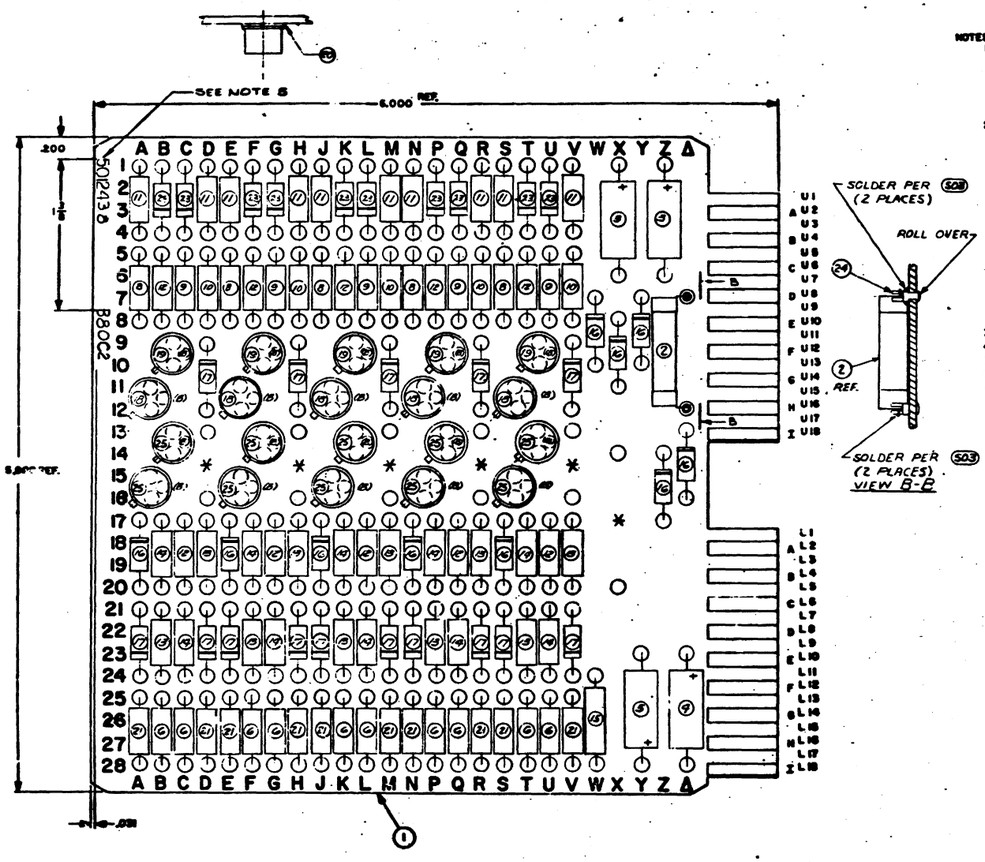
UNIVAC

DCT. 22•66

LM 5012430 - •

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1 | | | | | | | | | |
| 1 | | | | | | | | | |
| 1 | | | | | | | | | |

| REVISIONS | | | | | | |
|---|---|---|---|---|---|---|
| ZONE | LTR | EIR | DESCRIPTION – FOR DETAILS SEE EIR | CHK | DATE | APPROVED |
| | J | 11738-1 | REVISED & REDRAWN | BD | 6/1/67 | JB |







NOTES:

0 STRIPE ON DIODE BODY DENOTES CATHODE END.
○ INDICATES FIND NO.
<> INDICATES DESIGNATIONS STAMPED ON COMPONENT FOR REF. ONLY.
( ) INDICATES DESIGNATIONS FOR REF. ONLY & SHALL NOT BE STAMPED.

2) UNLESS OTHERWISE DESIGNATED

| | | | |
|---|---|---|---|
| CONTACT | A | SHALL BE | ⏚ |
| CONTACT | B | SHALL BE | SPARE |
| CONTACT | C | SHALL BE → | -8V |
| CONTACTS | D B E | SHALL BE → | -30V |
| CONTACT | F | SHALL BE → | -20V |
| CONTACT | G | SHALL BE → | +20V |
| CONTACT | L B | SHALL BE | -30V |
| CONTACT | I | SHALL BE | ⏚ |

3) MINIMUM SPACE FOR THIS BOARD = 1/2 INCH.
4) ASSEMBLE PER (501)
5)
6) # NO COMPONENTS REQUIRED (6 PLACES).
7) ALL AXIAL LEAD COMPONENTS EXCEPT DIODES TO BE MOUNTED .010 MIN FROM THE BOARD.
8) TEST PER (502) & (504)
9) USE OF GLASS BEAD ATTACHED TO "TO-5" TRANSISTOR WILL BE AN ACCEPTABLE SPACING DEVICE WHEN USED WITH MACHINE INSERTION ONLY.

DWG NO. 5012438

PART NO. 5012438-00
IDENT NO.

FOR MATL REQUIREMENTS SEE L/M, L'M REV LETTER CONTROLS DOCUMENT.


COMPANY CONFIDENTIAL INFORMATION

THIS DOCUMENT CONTAINS CONFIDENTIAL INFORMATION OF THE SPERRY RAND CORPORATION IN CONSIDERATION OF THE RECEIPT OF THIS DOCUMENT, THE RECIPIENT AGREES NOT TO REPRODUCE, COPY, USE OR TRANSMIT THIS DOCUMENT AND/OR THE INFORMATION THEREIN CONTAINED, IN WHOLE OR IN PART, OR TO SUFFER SUCH ACTION BY OTHERS, FOR ANY PURPOSE EXCEPT WITH THE WRITTEN PERMISSION, FIRST OBTAINED, OF SPERRY RAND CORPORATION, AND FURTHER AGREES TO SURRENDER SAME TO SPERRY RAND CORPORATION UPON DEMAND


| UNLESS OTHERWISE SPECIFIED | | | |
|---|---|---|---|
| DIMENSIONS IN INCHES TOL. ON | | | ANGLES |
| 2 PLACE DECIMALS | 3 PLACE DECIMALS | | |
| + / − | + / − | + / − | |
| HOLE DIA. TOL. | | | |
| 0 THRU .250 | .251 THRU .500 | .501 AND LARGER | |
| + .003 − .002 | + .005 − .003 | + .010 − .003 | |
| THREADS: EXT. CL 2A, INT CL 2B | | | |
| COMMODITY CODE | | | |

| | | |
|---|---|---|
| LAYOUT | A. PICHRDI | 5-24-65 |
| DRAFTSMAN | A. PICHRDI | 5-25-65 |
| CHECKER | BARBELLA | 5-26-65 |
| ENGINEER | R. TODD | 5-26-65 |
| APPROVAL | J. STEHLIK | 5-26-65 |

DO NOT SCALE THIS PRINT

CLASS A

UNIVAC
DIVISION OF SPERRY RAND CORPORATION

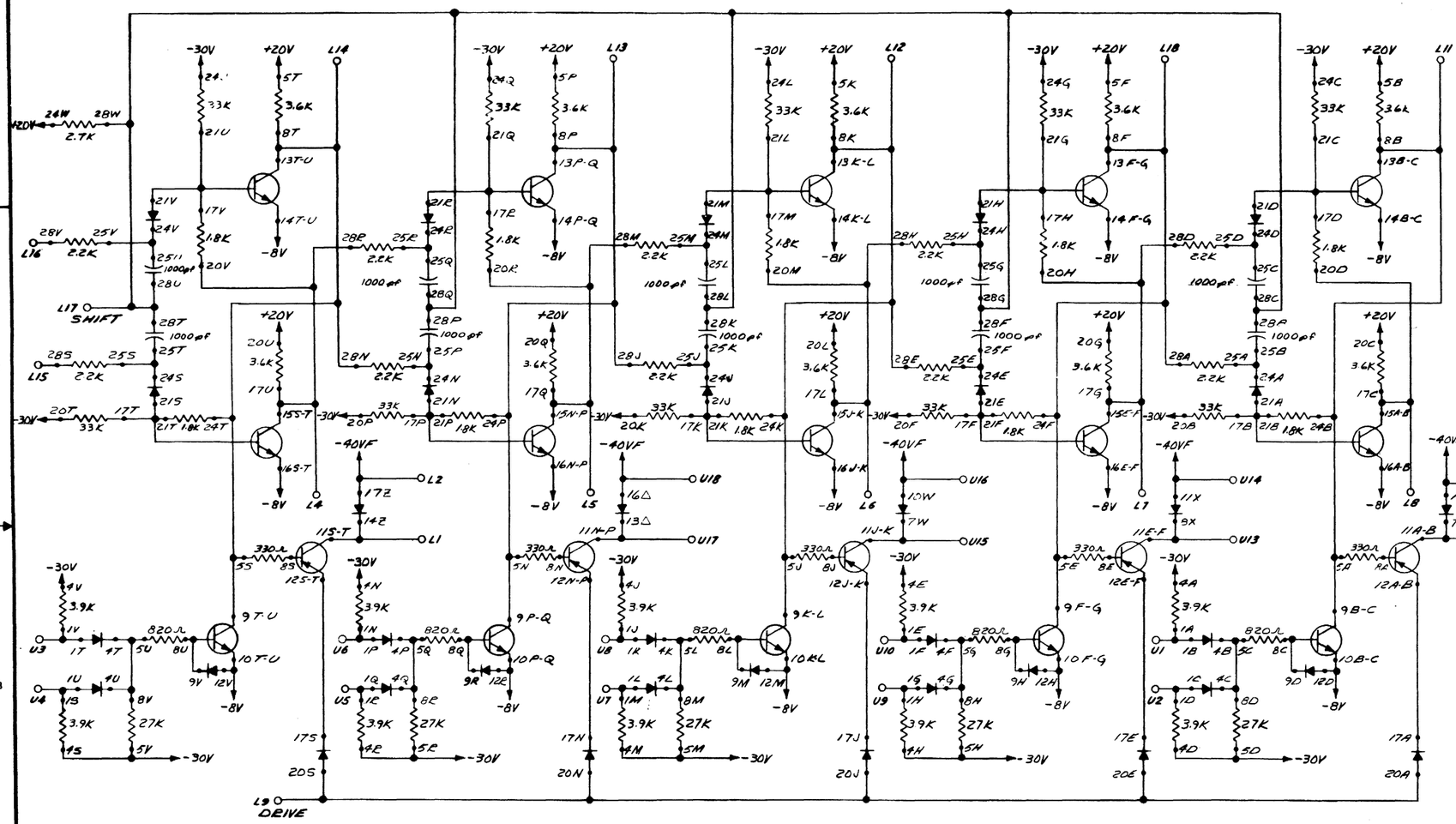
TITLE PUNCH READ-SUMMARY SHIFT STORAGE FF II ASSY. TYPE B 80C2

SIZE D | CODE IDENT. NO. | DWG NO. 5012438

SCALE 2/1 | WEIGHT | SHEET 1 OF 3

J

| REVISIONS | | | | | | |
|---|---|---|---|---|---|---|
| SYM | ZONE | EIR | DESCRIPTION | BY | DATE | APPROVED |
| D | | C-3328-1 | REDRAWN & REVISED | | 5-17-63 | |
| E | | C3570-1 | SEE EIR | | 6-13-63 | |
| F | | C-3624-1 | SEE EIR | | 7-24-63 | |
| G | | C-3966-1 | SEE EIR | | 10-24-63 | |




(L/M CONTINUED FROM SHEET 1)

| QTY REQD | FIND | REF DES | CODE IDENT | DWG SIZE | PART OR IDENTIFYING NO | NOMENCLATURE OR DESCRIPTION |
|---|---|---|---|---|---|---|
| 10 | 25 | 13B,13F,G 13K,L,13P,Q 13T,U,13M 15EF,15JK 15NP,15ST | | | 4907977 | TRANSISTOR |
| 2 | 24 | 24,12Δ | | A | 3010531 | TERMINAL STUD |
| 10 | 23 | 1B,1C,1F 1G,1K,1L,1U 1P,1Q,1T | | | 74202089 | DIODE EM83 |
| | 22 | | | | | |
| 10 | 21 | 25A,25D 25E,25M 25N,25H 25K,25F 25S,25V | | | 3010883-56 | RESISTOR 2.2K ½W ±2% |
| 20 | 20 | | | | 4000813 | INSULATOR PLATE PHENOLIC |
| 5 | 19 | 9B-C 9F-G 9K-L 9P-Q 9T-U | | | 4907975 | TRANSISTOR |
| 5 | 18 | 11AB,EF 11JK,NP 11ST | | | 4912961 | TRANSISTOR |
| | | | | | | |
| 15 | 17 | 9D,9H 9M,9R 9V,21A 21D,21E 21M,21J 21N,21K 21P,21S 21V | | | 3010810 | DIODE EM120 |
| 10 | 16 | 7W,7Y 8Y,13A 14Z,17A 17E,17J 17M,17S | | | 4907926 | DIODE |

LIST OF MATERIAL

| | | | |
|---|---|---|---|
| 00 | 5012348-00 | TYPE 2M-03 | |
| 00 | 5012348-00 | TYPE 2M-01 | |
| 00 | 5012348-00 | TYPE 2M9-03 | |
| 00 | 5012348-00 | TYPE 2M9-01 | |
| 00 | 5012348-00 | TYPE 2009-00 | |
| 00 | 5012348-00 | TYPE 2011-00 | |
| NEXT ASSY | | EQUIPMENT | |
| APPLICATION | | | |

UNLESS OTHERWISE SPECIFIED
ALL DIMENSIONS IN INCHES
TOLERANCE ON FRACTIONS ± —, DECIMALS ± —, ANGLES ± —
DECIMAL HOLE DIAMETER TOLERANCE: 0 THRU .250 +.003 −.002; 251 THRU .500 +.005 −.003; .501 & LARGER +.010 −.005
THREADS: EXT CL 2A, INT CL 2B
MATERIAL
FINISH

| | | DATE |
|---|---|---|
| LAYOUT | A. PICARDI | 5-20-62 |
| DRAFTSMAN | S. SCHIENVAR | 5/24/62 |
| CHECKER | O. Barbella | 8-14-62 |
| ENGINEER PROJ | R. TODD R. Todd | 8/28/62 |
| APPROVAL | J. D. Stabile | 8/24/62 |
| CCT. DES. | E. SEVILLA O. S. N. 8/27 | 1/2 |

CLASS A

Remington Rand Univac
DIVISION OF SPERRY RAND CORPORATION

TITLE: PUNCH READ-SUMMARY SHIFT STORAGE FF II ASSY TYPE B80C2

CODE IDENT NO. | SIZE D | DWG NO. 5012438

SCALE NONE | SHEET 2 OF

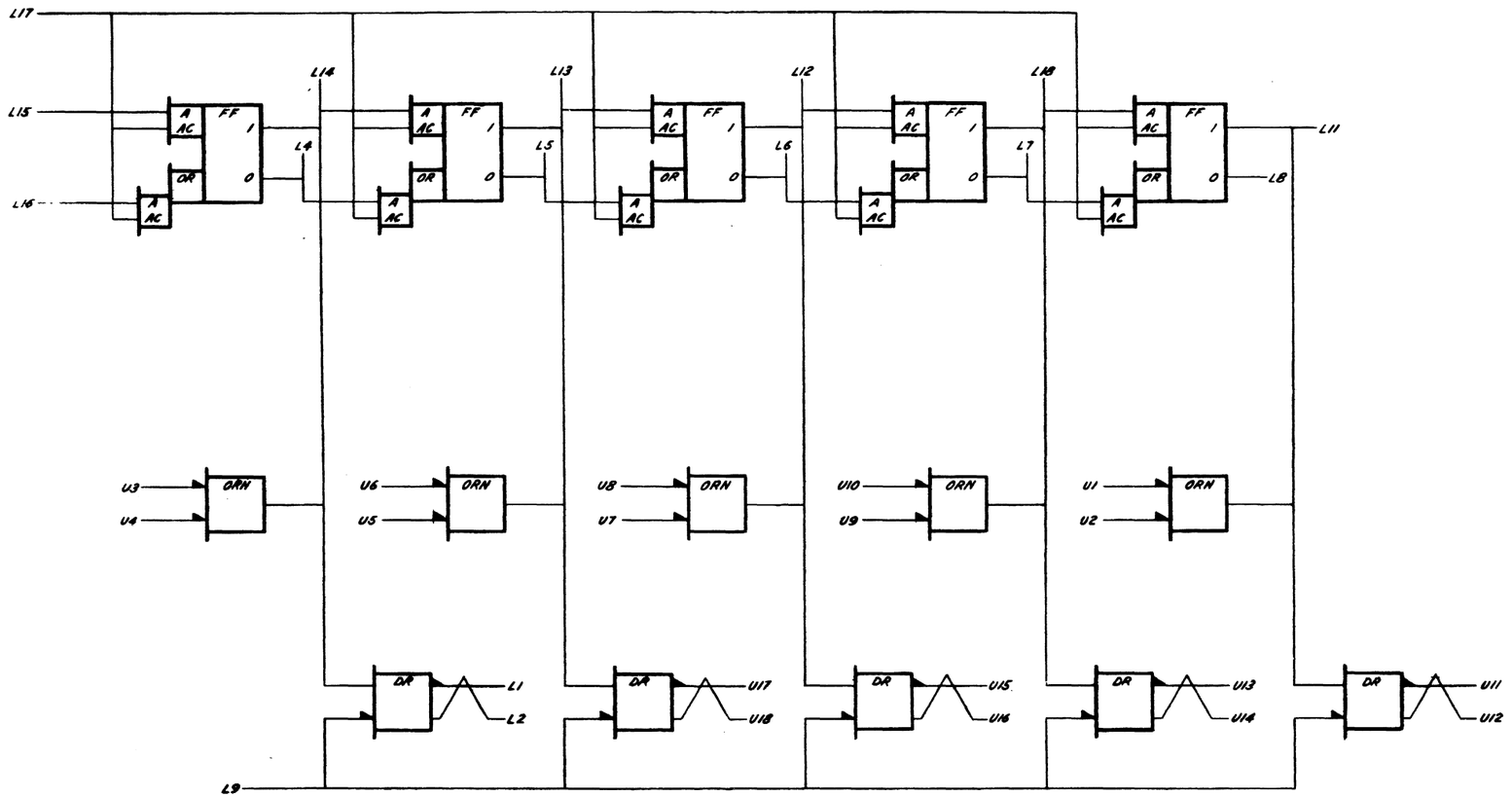
DO NOT SCALE THIS PRINT

5012438 ON SMG

THIS DOCUMENT CONTAINS CONFIDENTIAL INFORMATION OF THE REMINGTON RAND DIVISION OF SPERRY RAND CORPORATION AND IS FURNISHED PURSUANT TO THE FOLLOWING INSTRUMENT.

ON THE UNDERSTANDING THAT THIS DOCUMENT AND THE INFORMATION THEREIN MAY NOT BE DEALT WITH IN ANY MANNER EXCEPT FOR THE PURPOSES OF THAT INSTRUMENT TO AS UNDERSTOOD PERMITTED IN WRITING BY THE REMINGTON RAND DIVISION OF SPERRY RAND CORPORATION.

| REVISIONS | | | | | | |
|---|---|---|---|---|---|---|
| SYM | ZONE | EIR | DESCRIPTION | CHK | DATE | APPROVED |
| D | | C-3238-4 | REDRAWN & REVISED | RT | 5-8-63 | RT |
| E | | C-3510-4 | SEE EIR | RT | 6-12-63 | RT |
| F | | C-3624-1 | SEE EIR | RT | 7-24-63 | JBJ |
| G | 1-A | C-3966-1 | "B80C2" WAS "B80C1" | RT | 10-14-63 | JBJ |




| QTY REQD | FIND | REF DES | CODE IDENT | DWG SIZE | PART OR IDENTIFYING NO | NOMENCLATURE OR DESCRIPTION |
|---|---|---|---|---|---|---|

LIST OF MATERIAL

| | | |
|---|---|---|
| 00 | 5012348-06 | TYPE 2010-03 |
| 00 | 5012348-00 | TYPE 2011-01 |
| 00 | 5012348-00 | TYPE 2008-03 |
| 00 | 5012348-00 | TYPE 2009-01 |
| 00 | 5012348-00 | TYPE 2009-00 |
| 00 | 5012348-00 | TYPE 2011-00 |
| PT NO. | NEXT ASSY | EQUIPMENT |
| | APPLICATION | |

UNLESS OTHERWISE SPECIFIED
ALL DIMENSIONS IN INCHES
TOLERANCE ON FRACTIONS ± —, DECIMALS ± —, ANGLES ± —
DECIMAL HOLE DIAMETER TOLERANCE
0 THRU .250 + .003 — .002; 251 THRU .500 + .005 — .003; 501 & LARGER + .010 — .005
THREADS: EXT CL 2A, INT CL 2B
MATERIAL
FINISH

| | | |
|---|---|---|
| LAYOUT | BILL CHICKVARY | 7-10-62 |
| DRAFTSMAN | BILL CHICKVARY | 8-13-62 |
| CHECKER | R.T.C./R.TODD | 8-13-62 |
| ENGINEER PROG | R.TODD R. Todd | 8/28/62 |
| APPROVAL | J. D. Seddon | 8/30/62 |
| CCT DES. E. SEVILLA | D.A.N. 8/27/62 | |

CLASS A

Remington Rand Univac
DIVISION OF SPERRY RAND CORPORATION

TITLE
PUNCH READ-SUMMARY SHIFT
STORAGE FF II
ASSEMBLY B80C2

CODE IDENT NO. | SIZE D | DWG NO. 5012438

SCALE NONE | SHEET 3 OF

DO NOT SCALE THIS PRINT

D E F G

THIS DOCUMENT CONTAINS CONFIDENTIAL INFORMATION OF THE REMINGTON RAND DIVISION OF SPERRY RAND CORPORATION AND IS FURNISHED PURSUANT TO THE FOLLOWING INSTRUMENT

ON THE UNDERSTANDING THAT THIS DOCUMENT AND THE INFORMATION THEREON SHALL NOT BE DEALT WITH IN ANY MANNER DETRIMENTAL TO THE INTERESTS OF THE REMINGTON RAND DIVISION OF SPERRY RAND CORPORATION UNLESS OTHERWISE PERMITTED IN WRITING BY THE REMINGTON RAND DIVISION OF SPERRY RAND CORPORATION

DWG NO 5012438

UNIVAC **PARTS LIST** — CODE IDENT 92120 — ISSUE DATE 08/07/69 — CONTROL C 10 — TYPE M — ST A — PL 501243A — SHEET 1 — PL REV J

TITLE OF DRAWING FROM WHICH DETACHED: PUNCH READ-SUMMARY SHIFT STORAGE FFII ASSY TYPE B80C2 — CL A — U/M EA — 3 — DWG SIZE D — RANGE 00 THRU 00 — ISSUE 1 — PIC REV J

| FIND NO | QUANTITY REQUIRED | U/M | S P | PART OR IDENT NO DRAWING NO | DASH | NOMENCLATURE OR DESCRIPTION | S P | U C |
|---|---|---|---|---|---|---|---|---|
| 1 | 1 | EA | C | 5012437 | -00 | PRINTED WIRING BOARD HOLE LOCATION B80 | | |
| 2 | 1 | EA | B | 5011973 | -01 | FUSE,FAST ACTING 1.5 AMPS | | |
| | | | | REF DES | 1 | 7DELTA | | |
| 3 | 2 | EA | C | 2012129 | -04 | CAPACITOR FXD ELECT AL 50V DC 5 UF -10% +100% | | |
| | | | | REF DES | 1 | 1X,12 | | |
| 4 | 1 | EA | C | 2012128 | -07 | CAPACITOR FXD ELECT AL 25V DC 10 UF -10% +100% | | |
| | | | | REF DES | 1 | 23DELT A | | |
| 5 | 1 | EA | C | 2012127 | -09 | CAPACITOR FXD ELECT. AL 15V DC 20 UF -10% +100% | | |
| | | | | REF DES | 1 | 23Y | | |
| 6 | 10 | EA | C | 2012333 | -00 | CAPACITOR FXD PLSTC DIELECTRIC.001 UF +-10% 100V | | |
| | | | | REF DES | 1 | 25B 25C 25F 25G 25K 25L 25P 25Q 25T | | |
| | | | | | 4 | 25U | | |
| 8 | 5 | EA | C | 3010883 | -36 | RESISTOR FXD FILM - 330 OHMS 1/2WATT +- 2% | | |
| | | | | REF DES | 1 | 5A 5E 5J 5N 5S | | |
| 9 | 5 | EA | C | 3010883 | -46 | RESISTOR FXD FILM - 820 OHMS 1/2WATT +- 2% | | |
| | | | | REF DES | 1 | 5C 5G 5L 5Q 5U | | |
| 10 | 5 | EA | C | 3010883 | -82 | RESISTOR FXD FILM - 27000 OHMS 1/2WATT +- 2% | | |
| | | | | REF DES | 1 | 5D 5H 5M 5R 5V | | |
| 11 | 10 | EA | C | 3010883 | -62 | RESISTOR FXD FILM - 3900 OHMS 1/2WATT +- 2% | | |
| | | | | REF DES | 1 | 1A 1D 1G 1H 1J 1M 1N 1R 1S | | |

UNIVAC **PARTS LIST** — CODE IDENT 92120 — ISSUE DATE 08/07/69 — CONTROL C 10 — TYPE M — ST A — PL 501243A — SHEET 3 — PL REV J

TITLE OF DRAWING FROM WHICH DETACHED: PUNCH READ-SUMMARY SHIFT STORAGE FFII ASSY TYPE B80C2 — CL A — U/M EA — 3 — DWG SIZE D — RANGE 00 THRU 00 — ISSUE 1 — PIC REV J

| FIND NO | QUANTITY REQUIRED | U/M | S P | PART OR IDENT NO DRAWING NO | DASH | NOMENCLATURE OR DESCRIPTION | S P | U C |
|---|---|---|---|---|---|---|---|---|
| 19 | 5 | EA | C | 4907975 | -00 | TRANSISTOR,NPN,GERMANIUM - SWITCHING | | |
| | | | | REF DES | 1 | 9B,C 9F,G 9K,L 9P,Q 9T,U | | |
| 20 | 20 | EA | C | 4000813 | -00 | STANDOFF, TRANSISTOR | | |
| 21 | 10 | EA | C | 3010883 | -56 | RESISTOR FXD FILM - 2200 OHMS 1/2WATT +- 2% | | |
| | | | | REF DES | 1 | 25A 25D 25E 25M 25J 25M 25N 25R 25S | | |
| | | | | | 4 | 25V | | |
| 23 | 10 | EA | C | 74202089 | -00 | SEMICONDUCTOR DEVICE, DIODE GERMANIUM, EM89 | | |
| | | | | REF DES | 1 | 1B 1C 1F 1G 1K 1L 1U 1P 1Q | | |
| | | | | | 4 | 1T | | |
| 24 | 2 | EA | A | 3010531 | -00 | TERMINAL STUD- SOLDER TYPE, BR3/32 OD X 1/4 LG | | |
| | | | | REF DES | 1 | (7DELT A)(12D ELTA) | | |
| 25 | | EA | C | 4907977 | -00 | TRANSISTOR, NPN, GERMANIUM, SWITCHING | | |
| | | | | REF DES | 1 | 13BC 13FG 17KL 13PQ 13TU 15AB 15EF 15JK 15MP | | |
| | | | | | 4 | 15ST | | |
| A01 | | EA | D | 5014344 | -00 | CKT. PKG. TEST SHEET TYPE B80 | | |
| S01 | | XX | | DS00410 | | PRINTED CKT SPEC FOR ASSY OF | | |
| S02 | | X | A | CS01985 | -00 | GENERAL 1004 TEST SPEC | | |
| S03 | | XX | | DS00353 | | SOLDERING OF ELECTRICAL TERM. | | |
| Z01 | | | | C 3966 | 01 | EIR HISTORY: EIR REV , PL REV , PIC REV G | | |
| Z02 | | | | C 6565 | 12 | EIR HISTORY: EIR REV , PL REV G, PIC REV G | | |

UNIVAC **PARTS LIST** — CODE IDENT 92120 — ISSUE DATE 08/07/69 — CONTROL C 10 — TYPE M — ST A — PL 501243A — SHEET 2 — PL REV J

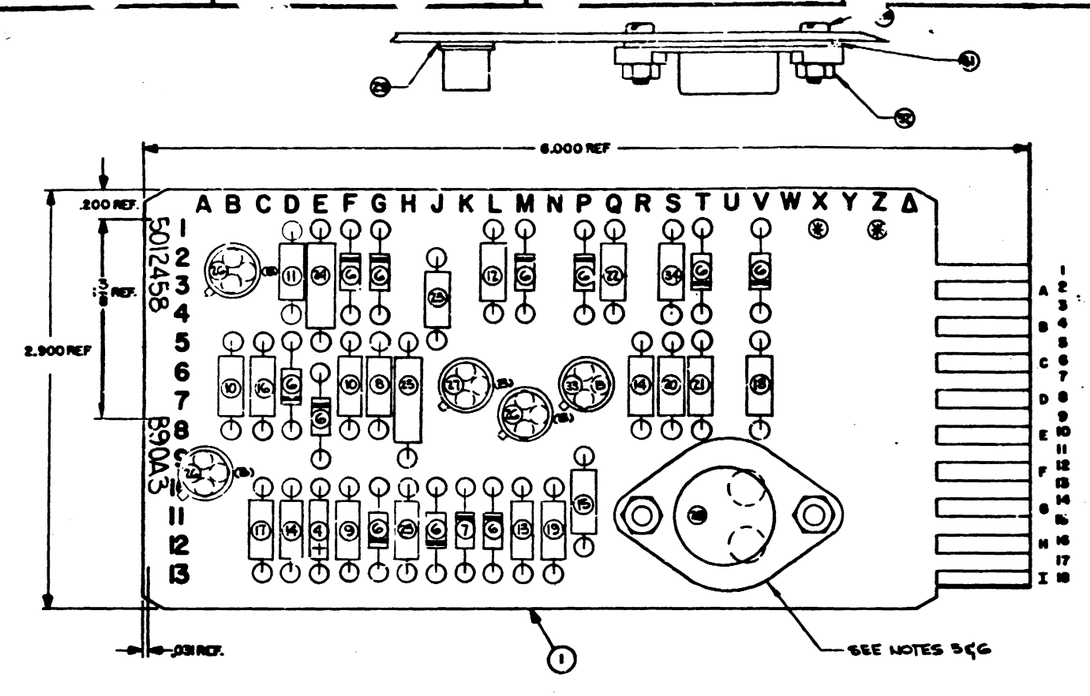
TITLE OF DRAWING FROM WHICH DETACHED: PUNCH READ-SUMMARY SHIFT STORAGE FFII ASSY TYPE B80C2 — CL A — U/M EA — 3 — DWG SIZE D — RANGE 00 THRU 00 — ISSUE 1 — PIC REV J

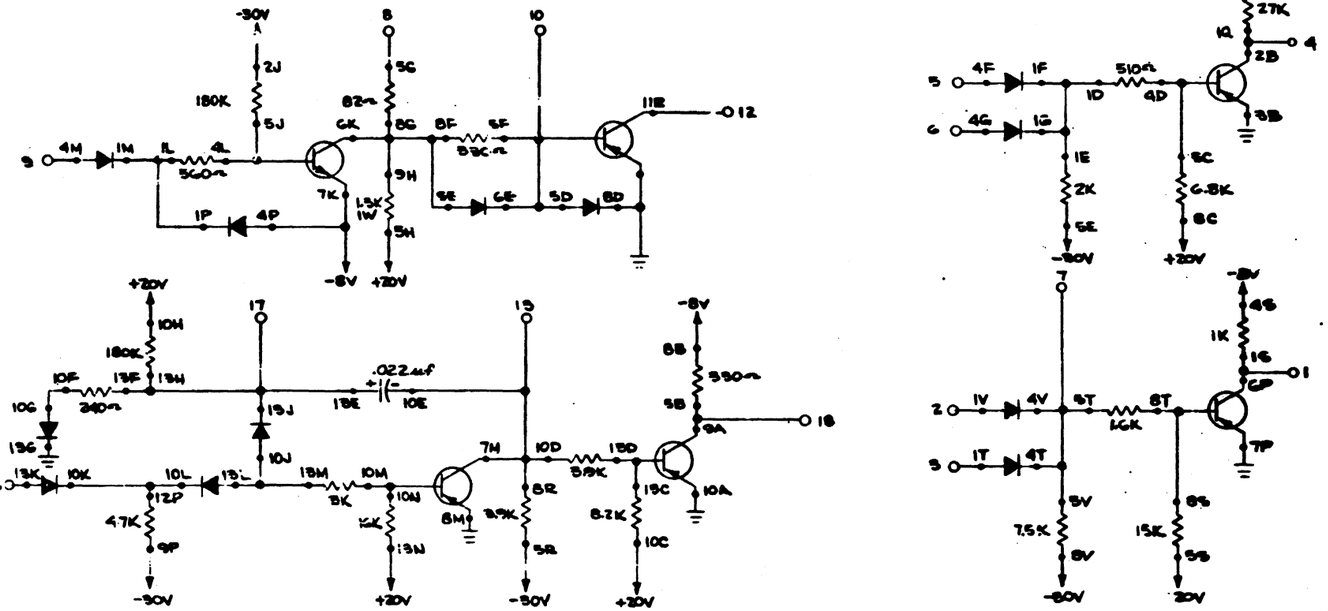
| FIND NO | QUANTITY REQUIRED | U/M | S P | PART OR IDENT NO DRAWING NO | DASH | NOMENCLATURE OR DESCRIPTION | S P | U C |
|---|---|---|---|---|---|---|---|---|
| | | | | | 4 | 1V | | |
| 12 | 10 | EA | C | 3010883 | -61 | RESISTOR FXD FILM - 3600 OHMS 1/2WATT +- 2% | | |
| | | | | REF DES | 1 | 5B 5F 5K 5P 5T 17C 17G 17L 17Q | | |
| | | | | | 4 | 17U | | |
| 13 | 10 | EA | C | 3010883 | -54 | RESISTOR FXD FILM - 1800 OHMS 1/2WATT +- 2% | | |
| | | | | REF DES | 1 | 17D 17H 17M 17R 17V 21B 21F 21K 21P | | |
| | | | | | 4 | 21T | | |
| 14 | 10 | EA | C | 3010883 | -84 | RESISTOR FXD FILM - 33000 OHMS 1/2WATT +- 2% | | |
| | | | | REF DES | 1 | 17B 17F 17K 17P 17T 21C 21G 21L 21Q | | |
| | | | | | 4 | 21U | | |
| 15 | 1 | EA | C | 3010885 | -58 | RESISTOR FIXED FILM 2700 OHMS, 1 WATT, +-2% | | |
| | | | | REF DES | 1 | 24W | | |
| 16 | 10 | EA | A | 4914079 | -01 | SEMICONDUCTOR DEVICE, DIODE SILICON SWITCHING 75 VOLTS | | |
| | | | | REF DES | 1 | 7W 7Y 8X (13 DELTA) 17A 17E 17J 17N | | |
| | | | | | 4 | 17S 14Z | | |
| 17 | 15 | EA | C | 3010810 | -00 | SEMICONDUCTOR DEVICE DIODE GERMANIUM: EM 120 | | |
| | | | | REF DES | 1 | 9D 9H 9M 9R 9V 21A 21D 21E 21H | | |
| | | | | | 4 | 21J 21M 21N 21R 21S 21V | | |
| 18 | 5 | EA | A | 4912961 | -00 | TRANSISTOR - PNP, GERMANIUM SWITCHING | | |
| | | | | REF DES | 1 | 11AB 11EF 11JK 11NP 11ST | | |

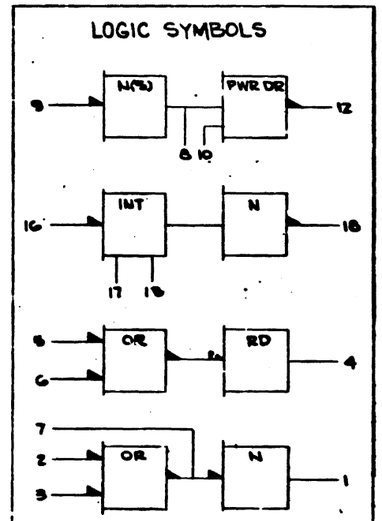
UNIVAC **PARTS LIST** — CODE IDENT 92120 — ISSUE DATE 08/07/69 — CONTROL C 10 — TYPE M — ST A — PL 501243A — SHEET 4 — PL REV J

TITLE OF DRAWING FROM WHICH DETACHED: PUNCH READ-SUMMARY SHIFT STORAGE FFII ASSY TYPE B80C2 — CL A — U/M EA — 3 — DWG SIZE D — RANGE 00 THRU 00 — ISSUE 1 — PIC REV J

| FIND NO | QUANTITY REQUIRED | U/M | S P | PART OR IDENT NO DRAWING NO | DASH | NOMENCLATURE OR DESCRIPTION | S P | U C |
|---|---|---|---|---|---|---|---|---|
| Z03 | | | | H 18062 | 05 | EIR HISTORY: EIR REV , PL REV H, PIC REV G | | |
| Z04 | | | | C 11738 | 01 | EIR HISTORY: EIR REV , PL REV J, PIC REV J | | |




NOTES:

1) STRIPE ON DIODE BODY DENOTES CATHODE END.
   ◯ INDICATES FIND NO.
   <> INDICATES DESIGNATIONS STAMPED ON COMPONENT FOR REF ONLY.
   ( ) INDICATES DESIGNATIONS FOR REF. ONLY & SHALL NOT BE STAMPED.
2) UNLESS OTHERWISE DESIGNATED

| | | | |
|---|---|---|---|
| CONTACT | A | SHALL BE | ⏚ |
| CONTACT | B | SHALL BE | SPARE |
| CONTACT | C | SHALL BE → | -8V |
| CONTACTS | D & E | SHALL BE → | -30V |
| CONTACT | F | SHALL BE → | -20V |
| CONTACT | G | SHALL BE → | +20V |
| CONTACT | H | SHALL BE → | SPARE |
| CONTACT | I | SHALL BE | ⏚ |

3) MINIMUM SPACE FOR THIS BOARD IS 1/2 INCH
4) ASSEMBLE PER (501)
5) TRANSISTOR LEADS SHALL NOT BE CLINCHED.
   @EXPOSE SCREW HEADS DURING SOLDERING PROCESS TO ASSURE ELECTRICAL CONTINUITY TO CIRCUITRY.
7) AXIAL LEAD COMPONENTS, EXCEPT DIODES, TO BE MOUNTED .010 MIN FROM THE BOARD.
8) * INTERFACE CONNECTION REQUIRED TO BE PROVIDED BY MANUFACTURING (2 PLACES)
9) TEST PER (502)
10) USE OF GLASS BEAD ATTACHED TO TO-5 TRANSISTOR WILL BE AN ACCEPTABLE ALTERNATE SPACING DEVICE WHEN USED WITH MACHINE INSERTION ONLY.

| SYM | ZONE | ECO | DESCRIPTION | DATE | APPROVED |
|---|---|---|---|---|---|
| B | | C-1707 | RELEASED | 9-7-62 | |
| C | C2 | C-1787 | FIND (3) WAS 4812516-03 | " " | |
| D | | C-3135-1 | SEE EIR | " " | |
| E | | C-1382-1 | ADDED NOTE 9 | " " | |
| F | | C-3509 | SEE EIR | " " | |
| G | 5 & 6C | C-3647-1 | ADDED NOTE 10 | " " | |
| H | | C-4787-1 | RELEASED DETACHED PER SEE EIR | " " | |
| L | | C-4852-1 | SEE EIR | " " | |

FOR MATERIAL REQUIREMENTS SEE DETACHED LIST OF MATERIAL
LM 5012458

REVISION LETTER IN LWR RH CORNER APPLIES TO PICTORIAL SHT (S)
LM REV LETTER CONTROLS DOCUMENT

THIS DISCLOSURE CONTAINS CONFIDENTIAL INFORMATION OF THE U.S. GOVERNMENT AND/OR OF OTHERS TO WHOM GOVERNMENT HAS, OR IS PURSUANT TO THE FOLLOW AND INSTRUCTIONS.

ALL RIGHTS RESERVED. COPYRIGHT © 1962 BY THE BENDIX CORPORATION

| | | |
|---|---|---|
| 00 5012C500 | TYPE 2010 | |
| NEXT ASSY | EQUIPMENT | |
| APPLICATION | | |

UNLESS OTHERWISE SPECIFIED
ALL DIMENSIONS IN INCHES
TOLERANCE ON FRACTIONS ± | DECIMALS ± | ANGLES ±
DECIMAL HOLE DIAMETER TOLERANCE
0 THRU .250 +.003 −.002 | .251 THRU .500 +.005 −.003 | .501 & LARGER +.010 −.005
THREADS INT CL 2A, INT CL 2B
MATERIAL
FINISH

| | | |
|---|---|---|
| LAYOUT | PICARDI AL | 8-1-62 |
| DRAFTSMAN | PICARDI, AL | 8-6-62 |
| CHECKER | | 8-14-62 |
| ENGINEER | R. TODD R. Todd | 8/28/62 |
| APPROVAL | | 9/6/62 |
| PROJ ENG'R | G. COGAN | 9/27/62 |

CLASS A
Flemington Road Plant
Division of Bendix Aviation Corporation
TITLE
DRIVER INTEGRATOR ASSEMBLY TYPE B90
SIZE D
DWG NO 5012458
SCALE 2/1
SHEET
DO NOT SCALE THIS PRINT
ORIGINAL

UNIVAC **PARTS LIST** | CODE IDENT 92120 | ISSUE DATE 06/05/69 | CONTROL C 10 | CA A | TYPE M | COMM CODE | ST A | PL 5012458 | SHEET 1 | PL REV L

TITLE OF DRAWING FROM WHICH DETACHED: DRIVER INTEGRATOR ASSY TYPE B90 | CL A | U/M EA | 1 | DWG SIZE D | RANGE 00 THRU 00 | ISSUE 1 | PR REV L

| FIND NO | QUANTITY REQUIRED | U/M | S | PART OR IDENT NO DRAWING NO | DASH | NOMENCLATURE OR DESCRIPTION | S P | L M G |
|---|---|---|---|---|---|---|---|---|
| 1 | 1 | EA | C | 5012457 | -00 | PRINTED WIRING BOARD HOLE LOCATION B90 | | |
| 4 | 1 | EA | C | 4912110 | -08 | CAP, FIXED ELECTROLYTIC TANT. .022 UF 35 VOLTS +- 20% | | |
| 6 | 11 | EA | C | 3010810 | -00 | SEMICONDUCTOR DEVICE DIODE GERMANIUM: EM 120 | | |
| | | | | REF DES | 1 | 1F 1G 1M 1P 1T 1V 5D 6E 10G | | |
| | | | | | 4 | 10J 10L | | |
| 7 | 1 | EA | A | 4914079 | -01 | SEMICONDUCTOR DEVICE, DIODE SILICON SWITCHING 75 VOLTS | | |
| | | | | REF DES | 1 | 10K | | |
| 8 | 1 | EA | C | 3010883 | -22 | RESISTOR FXD FILM - 82 OHMS 1/2WATT +- 2% | | |
| | | | | REF DES | 1 | 5G | | |
| 9 | 1 | EA | C | 3010883 | -33 | RESISTOR FXD FILM - 240 OHMS 1/2WATT +- 2% | | |
| | | | | REF DES | 1 | 10F | | |
| 10 | 2 | EA | C | 3010883 | -36 | RESISTOR FXD FILM - 330 OHMS 1/2WATT +- 2% | | |
| | | | | REF DES | 1 | 5B 5F | | |
| 11 | 1 | EA | C | 3010883 | -41 | RESISTOR FXD FILM - 510 OHMS 1/2WATT +- 2% | | |
| | | | | REF DES | 1 | 1D | | |
| 12 | 1 | EA | C | 3010883 | -42 | RESISTOR FXD FILM - 560 OHMS 1/2WATT +- 2% | | |
| | | | | REF DES | 1 | 1L | | |
| 13 | 1 | EA | C | 3010883 | -59 | RESISTOR FXD FILM - 3000 OHMS 1/2WATT +- 2% | | |
| | | | | REF DES | 1 | 10M | | |
| 14 | 2 | EA | C | 3010883 | -62 | RESISTOR FXD FILM - 3900 OHMS 1/2WATT +- 2% | | |

USM 1819

UNIVAC **PARTS LIST** | CODE IDENT 92120 | ISSUE DATE 06/05/69 | CONTROL C 10 | CA A | TYPE M | COMM CODE | ST A | PL 5012458 | SHEET 3 | PL REV L

TITLE OF DRAWING FROM WHICH DETACHED: DRIVER INTEGRATOR ASSY TYPE B90 | CL A | U/M EA | 1 | DWG SIZE D | RANGE 00 THRU 00 | ISSUE 1 | PR REV L

| FIND NO | QUANTITY REQUIRED | U/M | S | PART OR IDENT NO DRAWING NO | DASH | NOMENCLATURE OR DESCRIPTION | S P | L M G |
|---|---|---|---|---|---|---|---|---|
| | | | | REF DES | 1 | 1E | | |
| 25 | 1 | EA | C | 3010885 | -51 | RESISTOR FIXED FILM 1300 OHMS, 1 WATT, +-2% | | |
| | | | | REF DES | 1 | 5H | | |
| 26 | 3 | EA | C | 4907981 | -00 | TRANSISTOR - PNP, GERMANIUM, SWITCHING | | |
| | | | | REF DES | 1 | 2B 7H 9A | | |
| 27 | 1 | EA | C | 4907975 | -00 | TRANSISTOR, NPN, GERMANIUM - SWITCHING | | |
| | | | | REF DES | 1 | 6K | | |
| 28 | 1 | EA | A | 4912965 | -00 | TRANSISTOR PNP GERMANIUM, POWER | | |
| | | | | REF DES | 1 | 11R | | |
| 29 | 5 | EA | C | 4000813 | -00 | STANDOFF, TRANSISTOR | | |
| 30 | 2 | EA | A | 5014508 | -00 | SCREW, MACH PAN HD #4-40 BRASS 5/16 LG | | |
| 31 | 1 | EA | A | 3007023 | -00 | INSULATOR, PLATE FOR TO-3 TRANSISTOR | | |
| 32 | 2 | EA | A | 4912544 | -00 | NUT, PLAIN, HEX-MACH BRASS 4-40 UNC THD | | |
| 33 | 1 | EA | C | 4908000 | -01 | TRANSISTOR PNP GERMANIUM HAS LEAD SPREADER | | |
| | | | | REF DES | 1 | 6P | | |
| 34 | 1 | EA | C | 3010883 | -48 | RESISTOR FXD FILM - 1000 OHMS 1/2WATT +- 2% | | |
| | | | | REF DES | 1 | 1S | | |
| S01 | | XX | | DS00410 | | PRINTED CKT SPEC FOR ASSY OF | | |
| S02 | | EA | D | 5014350 | -00 | CIRCUIT PACKAGE TEST SHEET TYPE B90 | | |
| Z01 | | | | C 3647 | 01 | EIR HISTORY: EIR REV , PL REV , PIC REV 6 | | |

USM 1819

UNIVAC **PARTS LIST** | CODE IDENT 92120 | ISSUE DATE 06/05/69 | CONTROL C 10 | CA A | TYPE M | COMM CODE | ST A | PL 5012458 | SHEET 2 | PL REV L

TITLE OF DRAWING FROM WHICH DETACHED: DRIVER INTEGRATOR ASSY TYPE B90 | CL A | U/M EA | 1 | DWG SIZE D | RANGE 00 THRU 00 | ISSUE 1 | PR REV L

| FIND NO | QUANTITY REQUIRED | U/M | S | PART OR IDENT NO DRAWING NO | DASH | NOMENCLATURE OR DESCRIPTION | S P | L M G |
|---|---|---|---|---|---|---|---|---|
| | | | | REF DES | 1 | 5R 10D | | |
| 15 | 1 | EA | C | 3010883 | -64 | RESISTOR FXD FILM - 4700 OHMS 1/2WATT +- 2% | | |
| | | | | REF DES | 1 | 9P | | |
| 16 | 1 | EA | C | 3010883 | -68 | RESISTOR FXD FILM - 6800 OHMS 1/2WATT +- 2% | | |
| | | | | REF DES | 1 | 5C | | |
| 17 | 1 | EA | C | 3010883 | -70 | RESISTOR FXD FILM - 8200 OHMS 1/2WATT +- 2% | | |
| | | | | REF DES | 1 | 10C | | |
| 18 | 1 | EA | C | 3010883 | -69 | RESISTOR FXD FILM - 7500 OHMS 1/2WATT +- 2% | | |
| | | | | REF DES | 1 | 5V | | |
| 19 | 1 | EA | C | 3010883 | -77 | RESISTOR FXD FILM - 16000 OHMS 1/2WATT +- 2% | | |
| | | | | REF DES | 1 | 10N | | |
| 20 | 1 | EA | C | 3010883 | -76 | RESISTOR FXD FILM - 15000 OHMS 1/2WATT +- 2% | | |
| | | | | REF DES | 1 | 5S | | |
| 21 | 1 | EA | C | 3010883 | -53 | RESISTOR FXD FILM - 1600 OHMS 1/2WATT +- 2% | | |
| | | | | REF DES | 1 | 5T | | |
| 22 | 1 | EA | C | 3010883 | -82 | RESISTOR FXD FILM - 27000 OHMS 1/2WATT +- 2% | | |
| | | | | REF DES | 1 | 10 | | |
| 23 | 2 | EA | C | 3162268 | -16 | RESISTOR, FIXED, COMPOSITION- 180000 OHMS 1/2 WATT +-5% | | |
| | | | | REF DES | 1 | 2J 10M | | |
| 24 | 1 | EA | C | 3010885 | -55 | RESISTOR FIXED FILM 2000 OHMS, 1 WATT, +-2% | | |

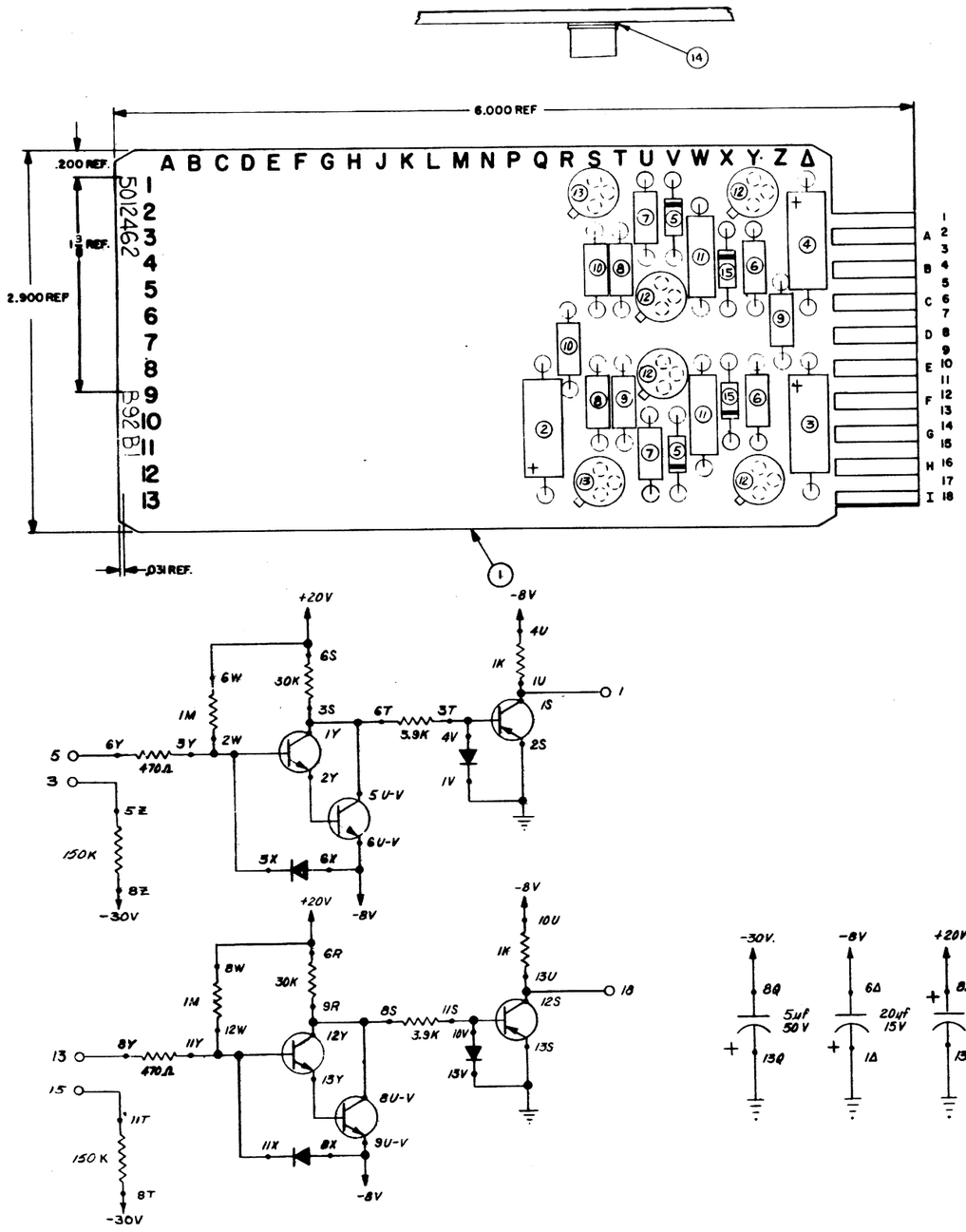
USM 1819

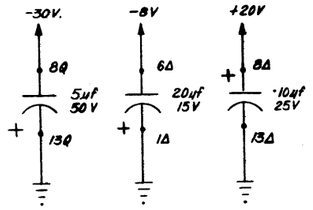
UNIVAC **PARTS LIST** | CODE IDENT 92120 | ISSUE DATE 06/05/69 | CONTROL C 10 | CA A | TYPE M | COMM CODE | ST A | PL 5012458 | SHEET 4 | PL REV L

TITLE OF DRAWING FROM WHICH DETACHED: DRIVER INTEGRATOR ASSY TYPE B90 | CL A | U/M EA | 1 | DWG SIZE D | RANGE 00 THRU 00 | ISSUE 1 | PIC REV L

| FIND NO | QUANTITY REQUIRED | U/M | S | PART OR IDENT NO DRAWING NO | DASH | NOMENCLATURE OR DESCRIPTION | S P | L M G |
|---|---|---|---|---|---|---|---|---|
| Z02 | | | | C 6565 | 12 | EIR HISTORY: EIR REV , PL REV G, PIC REV G | | |
| Z03 | | | | C 6985 | 01 | EIR HISTORY: EIR REV , PL REV H, PIC REV H | | |
| Z04 | | | | H 18062 | 05 | EIR HISTORY: EIR REV , PL REV J, PIC REV H | | |
| Z05 | | | | H 19288 | 03 | EIR HISTORY: EIR REV , PL REV K, PIC REV H | | |
| Z06 | | | | C 11542 | 01 | EIR HISTORY: EIR REV , PL REV L, PIC REV L | | |

USM 1819




NOTES:

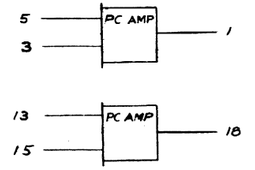
1) STAMP ON DIODE BODY DENOTES CATHODE END.
   ◯ INDICATES FIND NO.
   <> INDICATES DESIGNATIONS STAMPED ON COMPONENT FOR REF ONLY.
   ( ) INDICATES DESIGNATIONS FOR REF. ONLY & SHALL NOT BE STAMPED.
2) UNLESS OTHERWISE DESIGNATED

| | | | |
|---|---|---|---|
| CONTACT | A | SHALL BE | ⏚ |
| CONTACT | B | SHALL BE | SPARE |
| CONTACT | C | SHALL BE → | -8V |
| CONTACTS | D & E | SHALL BE → | -30V |
| CONTACT | F | SHALL BE → | -20V |
| CONTACT | G | SHALL BE → | +20V |
| CONTACT | H | SHALL BE → | SPARE |
| CONTACT | I | SHALL BE | ⏚ |

3) MINIMUM SPACE FOR THIS BOARD IS 1/2 INCH.
4) ASSEMBLE PER (S01)
5) AXIAL LEAD COMPONENTS, EXCEPT DIODES, TO BE MOUNTED .010 MIN FROM THE BOARD.
6) TEST PER (S02) AND (E01)
7) USE OF GLASS BEAD ATTACHED TO TO-5 TRANSISTOR WILL BE AN ACCEPTABLE ALTERNATE SPACING DEVICE WHEN USED WITH MACHINE INSERTION ONLY.

| DASH | ZONE | EIR | DESCRIPTION | BY | DATE | APPROVED |
|---|---|---|---|---|---|---|
| - | - | C-1317 | RELEASED | EP | NOTHING | |
| A | | C-1379-1 | SEE EIR | | 10-8-63 | |
| B | 1B | C-3270-1 | SEE EIR | | 1-29-64 | |
| C | | C-3739-1 | SEE EIR | | 9-19-64 | |
| D | C-6 | C-3822-1 | ADDED NOTE 6 | | 11-17-64 | |
| E | 3-5 | C-3647-1 | ADDED NOTE 7 | | 9-24-65 | |
| F | | 24473 | SEE EIR | | 3-16-66 | |
| G | | | HELD DETACHED L/M | | 9/9/66 | |
| H | | 7038-1 | SEE EIR | | 7/1/65 | |

LOGIC SYMBOLS




| | | | |
|---|---|---|---|
| 00 | 5012346-00 | TYPE 2011 | |
| 00 | 5012347-00 | TYPE 2009 | |
| 00 | 5012346-00 | TYPE 2010 | |
| DASH NO. | NEXT ASSY | EQUIPMENT | |
| | APPLICATION | | |

UNLESS OTHERWISE SPECIFIED
ALL DIMENSIONS IN INCHES
TOLERANCE ON FRACTIONS ± —, DECIMALS ± —, ANGLES ± —
DECIMAL HOLE DIAMETER TOLERANCE: 0 THRU .250 ± .003 / — .002; .251 THRU .500 ± .005 / — .003; .501 & LARGER ± .010 / — .005
THREADS EXT CL 2A, INT CL 2B
MATERIAL
FINISH

| | | |
|---|---|---|
| LAYOUT | VIC ROMING | 9-27-62 |
| DRAFTSMAN | MARY W. OCH | 10-5-62 |
| CHECKER | D. [illegible] | [illegible] |
| ENGINEER PROD | R. TODD R. Todd | 10/16/62 |
| APPROVAL | [illegible] | 10/16/62 |
| CCT. DES. | E. SEVILLA | [illegible] |

CLASS A

Remington Rand Univac
DIVISION OF SPERRY RAND CORPORATION

TITLE
PHOTOCELL AMP ASSY
TYPE B92B1

CODE IDENT NO.
SIZE D
DWG NO. 5012462
SCALE 2/1
SHEET 1 OF 2

DO NOT SCALE THIS PRINT

THIS DOCUMENT CONTAINS CONFIDENTIAL INFORMATION OF THE REMINGTON RAND DIVISION OF SPERRY RAND CORPORATION AND IS FURNISHED PURSUANT TO THE FOLLOWING INSTRUMENT:

ON THE UNDERSTANDING THAT THIS DOCUMENT AND THE INFORMATION THEREIN WILL NOT BE PUBLISHED IN ANY MANNER OR DISCLOSED TO ANY OTHER PERSON, FIRM OR CORPORATION WITHOUT THE WRITTEN CONSENT OF REMINGTON RAND DIVISION OF SPERRY RAND CORPORATION.

5012462

DETACHED LIST OF MATERIAL

PHOTOCELL AMP ASSY TYPE 892

UNIVAC

LM 5012462 J

| QTY PER | UNIT OF MEAS | FIND NO | REFERENCE DES A | REFERENCE DES B | REFERENCE DES C | CODE IDENT | IDENTIFICATION NO PART OR IDENT NO | IDENTIFICATION NO DASH | NOMENCLATURE OR DESCRIPTION | D C |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | PT NO. 5012462 00 THRU 03 | |
| 1 | | 1 | - - - | - - - | - - - | C | 5012461 | 00 | PRINTED WIRING BOARD HOLE LOCATION 892 | C |
| 1 | | 2 | 9Q | | | C | 2012129 | 04 | CAPACITOR FXD ELECT AL 50V DC 5 UF -10% +100% | H |
| 1 | | 5 | (3QELT A) | | | C | 2012128 | 07 | CAPACITOR FXD ELECT AL 25V DC 30 UF -10% +100% | H |
| 1 | | 4 | (1QELT A) | | | C | 2012127 | 08 | CAPACITOR FXD ELECT. AL 15V DC 20 UF -10% +100% | H |
| 2 | | 5 | 1V | 10V | | C | 3910810 | 00 | SEMICONDUCTOR DEVICE DIODE GERMANIUM EM 120 | H |
| 2 | | 6 | 3V | 8V | | C | 3910893 | 40 | RESISTOR FXD FILM = 470 OHMS 1/2WATT +- 2% | H |
| 2 | | 7 | 1U | 10U | | C | 3910883 | 48 | RESISTOR FXD FILM = 1000 OHMS 1/2WATT +- 2% | H |
| 2 | | 8 | 3T | 8S | | C | 3910883 | 62 | RESISTOR FXD FILM = 3900 OHMS 1/2WATT +- 2% | H |

DETACHED LIST OF MATERIAL

PHOTOCELL AMP ASSY TYPE 892

UNIVAC

LM 5012462 J

| QTY PER | UNIT OF MEAS | FIND NO | REFERENCE DES A | REFERENCE DES B | REFERENCE DES C | CODE IDENT | IDENTIFICATION NO PART OR IDENT NO | IDENTIFICATION NO DASH | NOMENCLATURE OR DESCRIPTION | D C |
|---|---|---|---|---|---|---|---|---|---|---|
| | | S31 | - - - | - - - | - - - | | | 0430410 | PRINTED CKT SPEC FOR ASSY OF | H |
| | | S32 | - - - | - - - | - - - | A | C901985 | 00 | GENERAL 1004 TEST SPEC | C |
| | | Z01 | - - - | - - - | - - - | C | 4479 | 01 | L/M PIC F REV HISTORY | |
| | | Z02 | - - - | - - - | - - - | C | 6565 | 12 | L/M F PIC F REV HISTORY | |
| | | Z03 | - - - | - - - | - - - | C | 7038 | 01 | L/M G PIC G REV HISTORY | |
| | | Z04 | - - - | - - - | - - - | H | 18062 | 05 | L/M H PIC G REV HISTORY | |
| | | Z05 | - - - | - - - | - - - | H | 18381 | 06 | L/M J PIC G REV HISTORY | |

SHEET 3 OF 3

DETACHED LIST OF MATERIAL

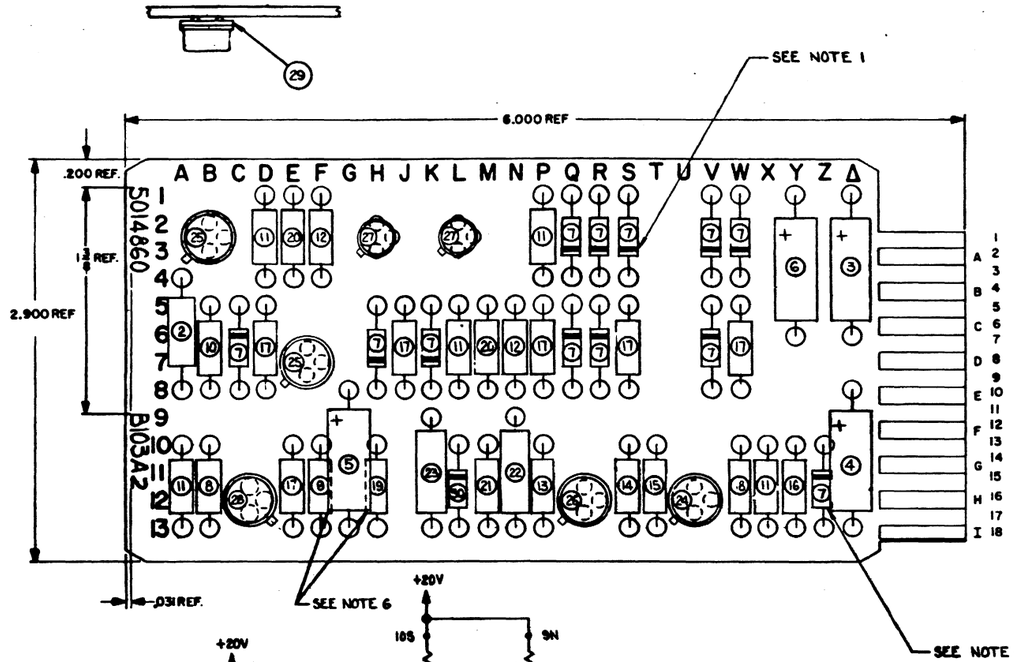
PHOTOCELL AMP ASSY TYPE 892

UNIVAC

LM 5012462 J

| QTY PER | UNIT OF MEAS | FIND NO | REFERENCE DES A | REFERENCE DES B | REFERENCE DES C | CODE IDENT | IDENTIFICATION NO PART OR IDENT NO | IDENTIFICATION NO DASH | NOMENCLATURE OR DESCRIPTION | D C |
|---|---|---|---|---|---|---|---|---|---|---|
| 2 | | 9 | 5Z | 3Y | | C | 3913838 | 00 | RESISTOR FXD FILM = 150000 OHMS 1/2WATT +- 2% | H |
| 2 | | 10 | 3S | 6R | | C | 3913883 | 83 | RESISTOR FXD FILM = 30000 OHMS 1/2WATT +- 2% | H |
| 2 | | 11 | 2W | 4R | | C | 2913108 | 80 | RESISTOR FIXED FILM 1000000 OHMS 1/2 WATT +- 1% | H |
| 4 | | 12 | 1Y | 50+V | 12V | A | 5913868 | 00 | TRANSISTOR NPN SILICON SWITCHING | C |
| | | R | 50+V | | 7Z | | | | | |
| 2 | | 13 | 1S | 12S | | C | 4937976 | 00 | TRANSISTOR = PNP, GERMANIUM SWITCHING | A |
| 2 | | 14 | - - - | - - - | - - - | C | 4930813 | 00 | STANDOFF, TRANSISTOR | A |
| 2 | | 15 | 3X | 9X | | A | 4914079 | 01 | SEMICONDUCTOR DEVICE, DIODE SILICON SWITCHING 75 VOLTS | A |
| | | R31 | - - - | - - - | - - - | D | 5914351 | 00 | CIRCUIT PACKAGE TEST SHEET TYPE 892 | C |

| REVISIONS | | | | | | |
|---|---|---|---|---|---|---|
| SHT | ZONE | E/R | DESCRIPTION | BY | DATE | APPROVED |
| F | | C18332-1 | REDRAWN & REVISED | | 4/4/68 | |



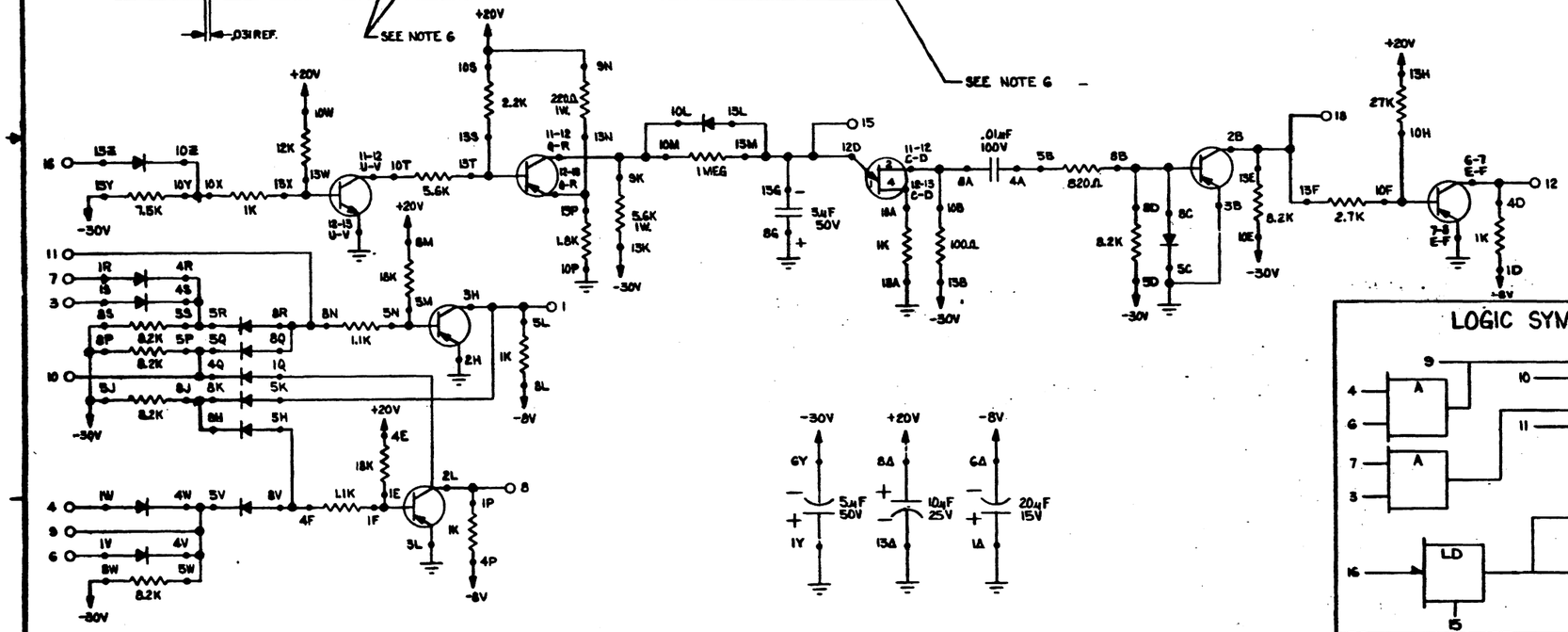

NOTES:

1) STRIPE ON DIODE BODY DENOTES CATHODE END.
   ◯ INDICATES FIND NO.
   <> INDICATES DESIGNATIONS STAMPED ON COMPONENT FOR REF ONLY.
   ( ) INDICATES DESIGNATIONS FOR REF. ONLY & SHALL NOT BE STAMPED.
2) UNLESS OTHERWISE DESIGNATED

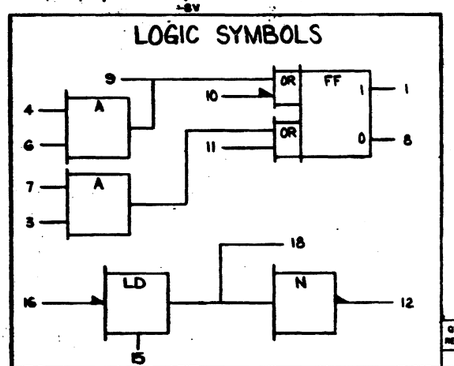
| | | | |
|---|---|---|---|
| CONTACT | A | SHALL BE | ⏚ |
| CONTACT | B | SHALL BE | SPARE |
| CONTACT | C | SHALL BE → | -8V |
| CONTACTS | D & E | SHALL BE → | -30V |
| CONTACT | F | SHALL BE → | -20V |
| CONTACT | G | SHALL BE → | +20V |
| CONTACT | H | SHALL BE → | SPARE |
| CONTACT | I | SHALL BE | ⏚ |

3) MINIMUM SPACE FOR THIS BOARD IS 1/2 INCH.
4) ASSEMBLE PER (501)
5) AXIAL LEAD COMPONENTS, EXCEPT DIODES, TO BE MOUNTED .010 MIN FROM THE BOARD.
6) INSERT COMPONENTS AT 10F, 10H AND 10Z BEFORE INSERTING COMPONENTS AT 8G AND 8A.

8. TEST PER (502) & (503)




## LOGIC SYMBOLS




| QTY REQD | FIND | REF DES | CODE IDENT | DWG NUMBER | PART OR IDENTIFYING NO | NOMENCLATURE OR DESCRIPTION |
|---|---|---|---|---|---|---|
| | | | | | | LIST OF MATERIAL |

| | | |
|---|---|---|
| 00 | SKB01 | 0600 |
| 00 | 5012348-01 | TYPE 22:1 |
| 00 | 5012348-02 | TYPE 20:3 |
| 00 | 5012348-00 | TYPE 21:0 |
| PC | NEXT ASSY | EQP PART |

APPLICATION

UNLESS OTHERWISE SPECIFIED
ALL DIMENSIONS IN INCHES
TOLERANCE f/d

| FRACTIONS | DECIMALS | ANGLES |
|---|---|---|
| ~ | ~ | ~ |

DECIMAL HOLE DIAMETER TOLERANCE

| 0 THRU .250 | .251 THRU .500 | .501 & LARGER |
|---|---|---|
| .003 | .005 | .010 |
| .002 | .003 | .006 |

THREADS EXT CL 2A, INT CL 2B

MATERIAL

FINISH

| | | |
|---|---|---|
| LAYOUT | K. OCH | 4-18-63 |
| DRAFTSMAN | KARL W. OCH | 4-18-63 |
| CHECKER | D Slagman | 4-24-63 |
| ENGINEER PROD. | R. TODD | 5/4/63 |
| APPROVAL | D.G.H. | 5-7-63 |
| ECT DES | | |

CLASS A

Remington Rand Univac
DIVISION OF SPERRY RAND CORPORATION

TITLE
# LONG DELAY CARD ASSY - TYPE B103

CODE IDENT NO

SIZE D

DWG NO 5014860

SCALE 2/1

SHEET 1 OF 1

THIS DOCUMENT CONTAINS CONFIDENTIAL INFORMATION OF THE REMINGTON RAND DIVISION OF SPERRY RAND CORPORATION AND IS FURNISHED SUBJECT TO THE FOLLOWING RESTRICTIONS:
ON THE UNDERSTANDING THAT THIS DOCUMENT AND THE INFORMATION THEREIN MAY NOT BE DISCLOSED TO ANY THIRD PARTY EXCEPT FOR THE PURPOSE OF USE, INSTRUMENT OR REPRODUCTION RIGHTS IN OR WITH THE THIS DRAWING OR SUCH BY REMINGTON RAND DIVISION OF SPERRY RAND CORPORATION

DO NOT SCALE THIS PRINT

DETACHED LIST OF MATERIAL

TITLE OF DRAWING FROM WHICH DETACHED: LONG DELAY CARD ASSY-TYPE 8103

DWG. NO. 5014860 REV. F

UNIVAC

JAN. 10-68 LIST OF MATERIAL

| QTY REQD | MFG QTY | MFG UNIT | FIND NO | REFERENCE DES A | REFERENCE DES B | REFERENCE DES C | CODE IDENT | S U B | IDENTIFICATION INFO PART OR IDENT NO DWG NO | IDENTIFICATION INFO PART OR IDENT NO DASH | NOMENCLATURE OR DESCRIPTION | D C L |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | - 6 | | | | | | | | PT NO. 5014860 00 THRU 00 | |
| 1 | | | 1 | - - - | - - - | - - - | - - | C | 5014859 | 00 | PRINTED WIRING BOARD ASSLE | C |
| | | | | | | | | | | | LOCATION B103 | |
| 1 | | | 2 | 6A | | | | C | 2012333 | 12 | CAPACITOR FXD PLSTC DIELECTRIC | M |
| | | | | | | | | | | | .01 UF +-10% 100V | |
| 1 | | | 3 | 10DELTA | | | | C | 2012127 | 09 | CAPACITOR FXD ELECT. AL 15V DC | M |
| | | | | | | | | | | | 20 UF -10% +100% | |
| 1 | | | 4 | 8DELTA | | | | C | 2012128 | 07 | CAPACITOR FXD ELECT AL 25V DC | M |
| | | | | | | | | | | | 10 UF -10% +100% | |
| 1 | | | 5 | 8G | | | | C | 2012129 | 02 | CAPACITOR FXD ELECT AL 50V DC | M |
| | | | | | | | | | | | 3 UF -10% +100% | |
| 1 | | | 6 | 1Y | | | | C | 2012129 | 04 | CAPACITOR FXD ELECT AL 50V DC | M |
| | | | | | | | | | | | 5 UF -10% +100% | |
| 12 | | | 7 | 1Q | 1R | 1S | | C | 3010810 | 00 | SEMICONDUCTOR DEVICE | M |
| | | | R | 1V | 1W | 5C | 02 | | | | DIODE GERMANIUM: EP 120 | |
| | | | R | 5H | 5K | 5Q | 03 | | | | | |
| | | | R | 5R | 5V | 10Z | 04 | | | | | |

CHANGE SHEETS MADE ON ITEMS Δ

FORM 64 1468 V (REV. 6/68)

DETACHED LIST OF MATERIAL

TITLE OF DRAWING FROM WHICH DETACHED: LONG DELAY CARD ASSY-TYPE 8103

DWG. NO. 5014860 REV. F

UNIVAC

JAN. 10-68 LIST OF MATERIAL

| QTY REQD | MFG QTY | MFG UNIT | FIND NO | REFERENCE DES A | REFERENCE DES B | REFERENCE DES C | CODE IDENT | S U B | IDENTIFICATION INFO PART OR IDENT NO DWG NO | IDENTIFICATION INFO PART OR IDENT NO DASH | NOMENCLATURE OR DESCRIPTION | D C L |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 6 | | | 17 | 5D | 5J | 5P | | C | 3010883 | 70 | RESISTOR FXD FILM - | M |
| | | | R | 5S | 5W | 10E | 02 | | | | 6200 OHMS 1/2WATT +- 2% | |
| 1 | | | 18 | 10W | | | | C | 3010883 | 74 | RESISTOR FXD FILM - | M |
| | | | | | | | | | | | 12000 OHMS 1/2WATT +- 2% | |
| 1 | | | 19 | 10H | | | | C | 3010883 | 82 | RESISTOR FXD FILM - | M |
| | | | | | | | | | | | 27000 OHMS 1/2WATT +- 2% | |
| 2 | | | 20 | 1E | 5M | | | C | 3010883 | 78 | RESISTOR FXD FILM - | M |
| | | | | | | | | | | | 18000 OHMS 1/2WATT +- 2% | |
| 1 | | | 21 | 10M | | | | C | 3162268 | 34 | RESISTOR,FIXED,COMPOSITION- | M |
| | | | | | | | | | | | 1000000 OHMS 1/2 WATT +-5% | |
| 1 | | | 22 | 9N | | | | C | 3010885 | 32 | RESISTOR FIXED FILM | M |
| | | | | | | | | | | | 220 OHMS, 1 WATT, +-2% | |
| 1 | | | 23 | 9K | | | | C | 3010885 | 66 | RESISTOR FIXED FILM | M |
| | | | | | | | | | | | 5600 OHMS, 1 WATT, +-2% | |
| 1 | | | 24 | 11-12 | U-V | | | C | 4907979 | 00 | TRANSISTOR,NPN,GERMANIUM - | B |
| | | | | | | | | | | | SWITCHING | |
| 2 | | | 25 | 2B | 6-7E-F | | | C | 4907976 | 00 | TRANSISTOR - PNP, GERMANIUM, | A |
| | | | | | | | | | | | SWITCHING | |

FORM 64 1468 V (REV. 6/68)

DETACHED LIST OF MATERIAL

TITLE OF DRAWING FROM WHICH DETACHED: LONG DELAY CARD ASSY-TYPE 8103

DWG. NO. 5014860 REV. F

UNIVAC

JAN. 10-68 LIST OF MATERIAL

| QTY REQD | MFG QTY | MFG UNIT | FIND NO | REFERENCE DES A | REFERENCE DES B | REFERENCE DES C | CODE IDENT | S U B | IDENTIFICATION INFO PART OR IDENT NO DWG NO | IDENTIFICATION INFO PART OR IDENT NO DASH | NOMENCLATURE OR DESCRIPTION | D C L |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | 8 | 10B | | | | C | 3010883 | 26 | RESISTOR FXD FILM - | M |
| | | | | | | | | | | | 100 OHMS 1/2WATT +- 2% | |
| 1 | | | 9 | 10F | | | | C | 3010883 | 58 | RESISTOR FXD FILM - | M |
| | | | | | | | | | | | 2700 OHMS 1/2WATT +- 2% | |
| 1 | | | 10 | 5B | | | | C | 3010883 | 46 | RESISTOR FXD FILM - | M |
| | | | | | | | | | | | 820 OHMS 1/2WATT +- 2% | |
| 3 | | | 11 | 1D | 1P | 5L | | C | 3010883 | 48 | RESISTOR FXD FILM - | M |
| | | | R | 10A | 10X | | 02 | | | | 1000 OHMS 1/2WATT +- 2% | |
| 2 | | | 12 | 1F | 5N | | | C | 3010883 | 49 | RESISTOR FXD FILM - | M |
| | | | | | | | | | | | 1100 OHMS 1/2WATT +- 2% | |
| 1 | | | 13 | 10P | | | | C | 3010883 | 54 | RESISTOR FXD FILM - | M |
| | | | | | | | | | | | 1600 OHMS 1/2WATT +- 2% | |
| 1 | | | 14 | 10S | | | | C | 3010883 | 56 | RESISTOR FXD FILM - | M |
| | | | | | | | | | | | 2200 OHMS 1/2WATT +- 2% | |
| 1 | | | 15 | 10T | | | | C | 3010883 | 66 | RESISTOR FXD FILM - | M |
| | | | | | | | | | | | 5600 OHMS 1/2WATT +- 2% | |
| 1 | | | 16 | 10V | | | | C | 3010883 | 69 | RESISTOR FXD FILM - | M |
| | | | | | | | | | | | 7500 OHMS 1/2WATT +- 2% | |

FORM 64 1468 V (REV. 6/68)

DETACHED LIST OF MATERIAL

TITLE OF DRAWING FROM WHICH DETACHED: LONG DELAY CARD ASSY-TYPE 8103

DWG. NO. 5014860 REV. F

UNIVAC

JAN. 10-68 LIST OF MATERIAL

| QTY REQD | MFG QTY | MFG UNIT | FIND NO | REFERENCE DES A | REFERENCE DES B | REFERENCE DES C | CODE IDENT | S U B | IDENTIFICATION INFO PART OR IDENT NO DWG NO | IDENTIFICATION INFO PART OR IDENT NO DASH | NOMENCLATURE OR DESCRIPTION | D C L |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | 26 | 11-12 | G-R | | | C | 4907979 | 00 | TRANSISTOR PNP GERMANIUM HIGH | A |
| | | | | | | | | | | | VOLTAGE | |
| 2 | | | 27 | 2H | 2L | | | C | 4906000 | 01 | TRANSISTOR PNP GERMANIUM | M |
| | | | | | | | | | | | MAS LEAD SPREADER. | |
| 1 | | | 28 | 11-12 | C-D | | | A | 5014898 | 00 | TRANSISTOR,UNI-JUNCTION | C |
| 5 | A | | 29 | - - - | - - - | - - - | - - | C | 4000813 | 00 | STANDOFF, TRANSISTOR. | A |
| 1 | | | 30 | 10L | | | | A | 4914079 | 01 | SEMICONDUCTOR DEVICE, DIODE | A |
| | | | | | | | | | | | SILICON SWITCHING 75 VOLTS | |
| | | | S01 | - - - | - - - | - - - | - - | | 0500410 | | PRINTED CKT SPEC FOR ASSY OF | M |
| | | | S02 | - - - | - - - | - - - | - - | A | C50195 | 00 | GENERAL 1004 TEST SPEC | C |
| | | | S03 | - - - | - - - | - - - | - - | D | 5020166 | 00 | CIRCUIT PACKAGE TEST SHEET | C |
| | | | | | | | | | | | TYPE 8103 | |
| | | | 201 | - - - | - - - | - - - | - - | C | 3624 | 01 | L/W PIC B REV HISTORY | |
| | | | 202 | - - - | - - - | - - - | - - | C | 6545 | 12 | L/W B PIC B REV HISTORY | |
| | | | 203 | - - - | - - - | - - - | - - | C | 6522 | 01 | L/W C PIC C REV HISTORY | |

FORM 64 1468 V (REV. 6/68)

**DETACHED LIST OF MATERIAL**

TITLE OF DRAWING FROM WHICH DETACHED: LONG DELAY CARD ASSY-TYPE

B103

UNIVAC — DIVISION OF SPERRY RAND CORPORATION

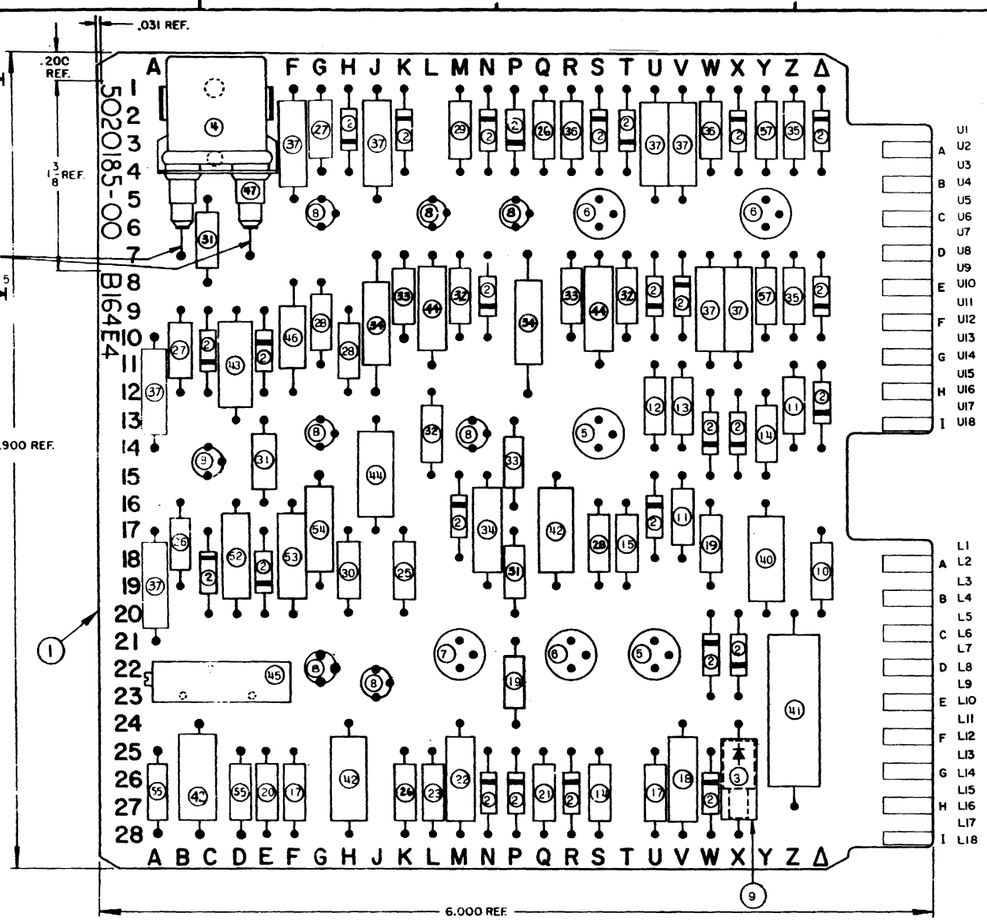
JAN. 10, 68 LIST OF MATERIAL

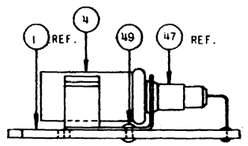
| | | | | | |
|---|---|---|---|---|---|
| ENG. PROJ. CODE 10 | UNIT OF MEASURE | DWG. SIZE D | LM | DWG. NO. 5014860 | REV. F * |
| MFG PROJ. CODE | L/M CLASS A | DCL C | LIST OF MATERIA. IDENTIFICATION | | ISSUE NO. 1 |
| | | | CODE IDENT. NO | PIC REV. F | SHEET 5 |

| QTY. REQD | MFG. QTY. | MFG. U/M | FIND | REFERENCE DES A | REFERENCE DES B | REFERENCE DES C | CODE IDENT | SIZE | IDENTIFICATION INFO. PART OR IDENT NO. DWG. NO. | IDENTIFICATION INFO. DASH | NOMENCLATURE OR DESCRIPTION | DCL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Z04 | - - - | - - - | - - - | - - | | H 18062 | 06 | L/M D PIC C REV HISTORY | |
| | | | Z05 | - - - | - - - | - - - | - - | | H 19288 | 03 | L/M E PIC C REV HISTORY | * |
| | Δ | | Z06 | - - - | - - - | - - - | - - | | C10352 | 01 | L/M F PIC F REV HISTORY | |

M. Hanley

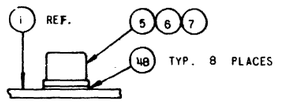
SHEET 5 OF 5 FORM #A 1648 V (REV. 6/63)




MOUNTING OF FIND NO. 47 & FIND NO. 4

VIEW A A



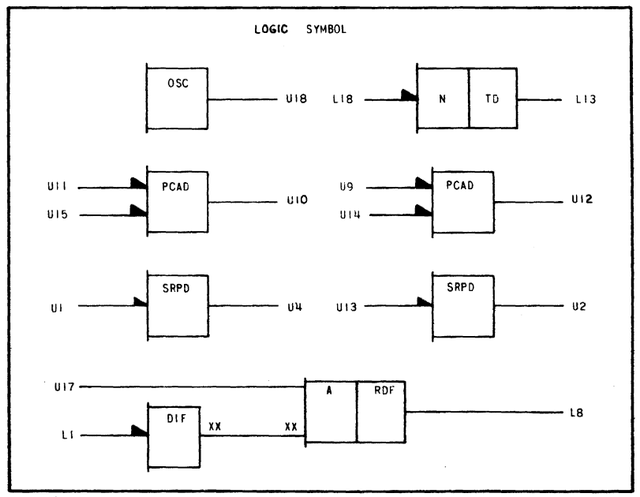

MOUNTING OF TRANSISTOR & SPACER

## NOTES:

1. STRIPE ON DIODE BODY DENOTES CATHODE END.
   ◯ :INDICATES FIND NO.
   <> INDICATES DESIGNATIONS STAMPED ON COMPONENT FOR REF. ONLY.
   ( ) INDICATES DESIGNATIONS FOR REF. ONLY & SHALL NOT BE STAMPED.
2. UNLESS OTHERWISE DESIGNATED
   - CONTACT A SHALL BE ⏚
   - CONTACT B SHALL BE SPARE
   - CONTACT C SHALL BE —▶ −8V
   - CONTACT D & E SHALL BE —▶ −30V
   - CONTACT F SHALL BE —▶ −CL
   - CONTACT G SHALL BE —▶ +20V
   - CONTACT H SHALL BE SPARE
   - CONTACT I SHALL BE ⏚
3. MINIMUM SPACE FOR THIS BOARD IS 1 INCH.
4. ASSEMBLE PER (S01)
5. LEADS FROM COMPONENT (47) NOT TO BE CLINCHED
6. TEST PER (S02) (S03)
7. SOLDER PER (S04)

| REVISIONS | | | | | | |
|---|---|---|---|---|---|---|
| REV | ZONE | E.R. | DESCRIPTION | CHK | DATE | APPROVED |
| A | | — | REVISED TO AGREE WITH B164E4 | | 12-15-64 | — |
| A | | HM8300 | RELEASED | | 1-11-65 | DON |
| [illegible] | | [illegible] | SEE ER | | [illegible] | [illegible] |
| [illegible] | | 1491 | SEE EIR | | [illegible] | [illegible] |
| D | | C9349-1 | SEE EIR | | 1-1-65 | [illegible] |
| [illegible] | | [illegible] | SEE EIR | | [illegible] | [illegible] |
| F | | C7768 | SEE EIR | | 1-1-65 | [illegible] |
| G | | C9194 | SEE EIR | | 4-1-67 | [illegible] |
| K | | C9875-1 | SEE EIR | | 11-3-67 | [illegible] |
| L | | C10063-1 | SEE EIR | | 7-1-68 | [illegible] |

LOGIC SYMBOL




| SHEET | 1 | 2 |
|---|---|---|
| REV | L | K |
| DESIGN LEVEL | B164E4 | |

FOR MATERIAL REQUIREMENTS SEE DETACHED LIST OF MATERIAL
LM 5020185
REVISION LETTER IN LWR RH CORNER APPLIES TO PICTORIAL SHT (S)
LM REV LETTER CONTROLS DOCUMENT

PT. NO. 5020185-00

THIS DOCUMENT CONTAINS CONFIDENTIAL INFORMATION OF THE REMINGTON RAND DIVISION OF SPERRY RAND CORPORATION AND IS FURNISHED PURSUANT TO THE FOLLOWING INSTRUMENT

ON THE UNDERSTANDING THAT THIS DOCUMENT AND THE INFORMATION THEREON MAY NOT BE DEALT WITH IN ANY MANNER EXCEPT FOR THE PURPOSES OF THAT INSTRUMENT OR AS OTHERWISE PERMITTED IN WRITING BY THE REMINGTON RAND DIVISION OF SPERRY RAND CORPORATION.

| | | | |
|---|---|---|---|
| BO | 5024358-00 | 1004515 | |
| PT | NEXT ASSY | EQUIP | |
| | APPLICATION | | |

UNLESS OTHERWISE SPECIFIED: DIMENSIONS IN INCHES; TOLERANCE: FRACTIONS / DECIMALS / ANGLES; DECIMAL TOLERANCE: .XXX ±.003, .XX ±.005, .X ±.010, ANGULAR ±.002, ±.003, ±.005; THREADS EXT CL 2A INT CL 2B; MATERIAL; FINISH

| | | |
|---|---|---|
| DRAWN | V. SNAPSTYS | 5-12-64 |
| DRAFTSMAN | V. Snapstys | 5-14-64 |
| CHECKER | | 5-16-64 |
| ENGINEER | D. NEDDENRIEP | 1-1-[illegible] |
| APPROVAL | [illegible] | [illegible] |

CLASS A

Remington Rand Univac
DIVISION OF SPERRY RAND CORPORATION

TITLE
# COMPONENT ASSEMBLY TYPE B164
CLOCK, RDF & SPECIAL DRIVERS

CODE IDENT NO | SIZE D | DWG NO 5020185

SCALE 2:1 | SHEET 1 OF 2

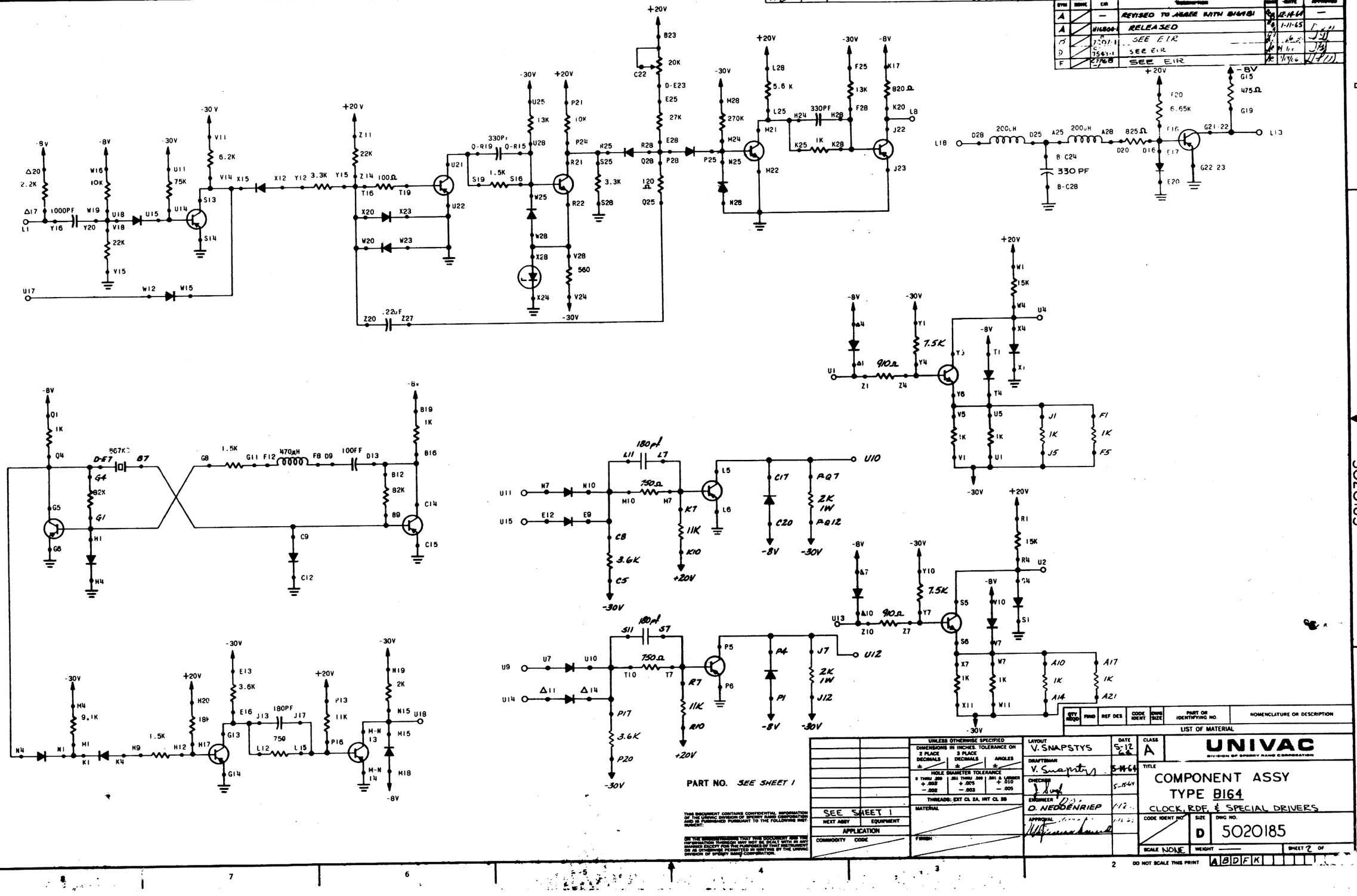
DO NOT SCALE THIS PRINT

A B C D E F G K L

5020185 B

| ZONE | REVS | E.W. | DESCRIPTION | BY | DATE | APPROVED |
|---|---|---|---|---|---|---|
| A | | — | REVISED TO AGREE WITH B1416I | | 12-14-64 | — |
| A | | W18804 | RELEASED | | 1-11-65 | |
| B | | 77091-1 | SEE EIR | | 6-2-66 | |
| D | | 75611-1 | SEE EIR | | 11-4-66 | |
| F | | 27768 | SEE EIR | | 11-7-66 | |

K | 79875-1 | SEE EIR




PART NO. SEE SHEET 1

THIS DOCUMENT CONTAINS CONFIDENTIAL INFORMATION OF THE UNIVAC DIVISION OF SPERRY RAND CORPORATION AND IS FURNISHED PURSUANT TO THE FOLLOWING RESTRICTIVE AGREEMENT:

OR THE RECIPIENT AGREES THAT THIS DOCUMENT AND THE INFORMATION THEREIN MAY NOT BE DEALT WITH IN ANY MANNER EXCEPT FOR THE PURPOSES OF THAT INSTRUMENT OR AS OTHERWISE PERMITTED IN WRITING BY THE UNIVAC DIVISION OF SPERRY RAND CORPORATION.

| SEE SHEET 1 | |
|---|---|
| NEXT ASSY | EQUIPMENT |
| APPLICATION | |
| COMMODITY CODE | |

UNLESS OTHERWISE SPECIFIED
DIMENSIONS IN INCHES. TOLERANCE ON 2 PLACE DECIMALS ±; 3 PLACE DECIMALS ±; ANGLES ±
HOLE DIAMETER TOLERANCE: 0 THRU .250 +.002 −.002; .251 THRU .500 +.004 −.003; .501 & LARGER +.010 −.005
THREADS: EXT CL 2A, INT CL 3B
MATERIAL
FINISH

| | | |
|---|---|---|
| LAYOUT | V. SNAPSTYS | 5-12 |
| DRAFTSMAN | V. Snapstys | 5-11-64 |
| CHECKER | | 5-11-64 |
| ENGINEER | D. NEDDENRIEP | 1-12 |
| APPROVAL | | 1-11-65 |

CLASS A

UNIVAC
DIVISION OF SPERRY RAND CORPORATION

TITLE
COMPONENT ASSY
TYPE B164
CLOCK, RDF, & SPECIAL DRIVERS

CODE IDENT NO. | SIZE D | DWG NO. 5020185
SCALE NONE | WEIGHT —— | SHEET 2 OF

DO NOT SCALE THIS PRINT | A B D F K

| QTY REQD | FIND | REF DES | CODE IDENT | DWG SIZE | PART OR IDENTIFYING NO. | NOMENCLATURE OR DESCRIPTION |
|---|---|---|---|---|---|---|

LIST OF MATERIAL

DWG NO. 5020185 B

UNIVAC 1219-B

DETACHED LIST OF MATERIAL

COMPONENT ASSY TYPE 8164

CLOCK, RDF & SPECIAL DRIVERS

UNIVAC

LM 5020185 REV L SHEET 1

ENG PROJ CODE 09 | UNIT OF MEASURE | DWG SIZE D

MFG PROJ CODE | LM CLASS A | DCL C

DEC. 12:67 LIST OF MATERIAL

| QTY PROD | MFG QTY | MFG U/M | FIND | REFERENCE DES A | B | C | CODE IDENT | IDENTIFICATION INFO PART OR IDENT NO DWG NO | DASH | NOMENCLATURE OR DESCRIPTION | D C I |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 1 | | | | | | | PT NO. 5020185 00 THRU 00 | |
| 1 | | | 1 | | | | C | 5020184 | 00 | PRINTED WIRING BOARD HOLE LOCATION B164 | C |
| 27 | | | 2 | C9 | C17 | E9 | C | 3010810 | 00 | SEMICONDUCTOR DEVICE DIODE GERMANIUM: EM 120 | M |
| | | | | R E17 | H1 | K1 | 02 | | | | |
| | | | | R M15 | N1 | N7 | 03 | | | | |
| | | | | R N25 | P1 | P25 | 04 | | | | |
| | | | | R R25 | S1 | T1 | 05 | | | | |
| | | | | R [illegible] | U15 | V7 | 06 | | | | |
| | | | | R #12 | #20 | #25 | 07 | | | | |
| | | | | R X1 | X12 | X20 | 08 | | | | |
| | | | | R (DELTA 1) | | | 09 | | | | |
| | | | | R (DELTA 7) | | | 10 | | | | |
| | | | | R (DELTA 11) | | | 11 | | | | |
| 1 | | | 3 | X24 | | | C | 4907924 | 21 | SEMICONDUCTOR DEVICE, DIODE, SILICON VOLTAGE REGULATOR 1W | M |
| 1 | | | 4 | | | | A | 3004114 | 05 | CRYSTAL UNIT, QUARTZ 667.300 KILOCYCLES/SEC. | M |

DETACHED LIST OF MATERIAL

COMPONENT ASSY TYPE 8164

CLOCK, RDF & SPECIAL DRIVERS

UNIVAC

LM 5020185 REV L SHEET 2

ENG PROJ CODE 09 | UNIT OF MEASURE | DWG SIZE D

MFG PROJ CODE | LM CLASS A | DCL C

DEC. 12:67 LIST OF MATERIAL

| QTY PROD | MFG QTY | MFG U/M | FIND | REFERENCE DES A | B | C | CODE IDENT | IDENTIFICATION INFO PART OR IDENT NO DWG NO | DASH | NOMENCLATURE OR DESCRIPTION | D C I |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2 | | | 5 | S13 | U21 | | C | 4907976 | 00 | TRANSISTOR - PNP, GERMANIUM, SWITCHING | A |
| 3 | | | 6 | S5 | Y5 | R21 | C | 4907975 | 00 | TRANSISTOR, NPN, GERMANIUM - SWITCHING | B |
| 1 | | | 7 | M21 | | | A | 4912957 | 00 | TRANSISTOR NPN SILICON SWITCHING | A |
| 8 | | | 8 | C14 | G5 | G13 | C | 4908000 | 01 | TRANSISTOR PNP GERMANIUM HAS LEAD SPREADER | M |
| | | | | R G21,22 | J22 | M,N13 | 02 | | | | |
| | | | | R L5 | P5 | | 03 | | | | |
| AR | | | 9 | | | | C | 3004195 | 22 | INSULATION SLV, ELEC- VINYL FOR #3 WIRE, .020 WALL THK. | M |
| 1 | | | 10 | (DELTA 17) | | | C | 3010883 | 56 | RESISTOR FXD FILM - 2200 OHMS 1/2WATT +- 2% | M |
| 2 | | | 11 | V15 | Z11 | | C | 3010883 | 80 | RESISTOR FXD FILM - 22000 OHMS 1/2WATT +- 2% | M |
| 1 | | | 12 | U11 | | | C | 3010883 | 93 | RESISTOR FXD FILM - 75000 OHMS 1/2WATT +- 2% | M |

DETACHED LIST OF MATERIAL

COMPONENT ASSY TYPE 8164

CLOCK, RDF & SPECIAL DRIVERS

UNIVAC

LM 5020185 REV L SHEET 3

ENG PROJ CODE 09 | UNIT OF MEASURE | DWG SIZE D

MFG PROJ CODE | LM CLASS A | DCL C

DEC. 12:67 LIST OF MATERIAL

| QTY PROD | MFG QTY | MFG U/M | FIND | REFERENCE DES A | B | C | CODE IDENT | IDENTIFICATION INFO PART OR IDENT NO DWG NO | DASH | NOMENCLATURE OR DESCRIPTION | D C I |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | 13 | V11 | | | C | 3010883 | 67 | RESISTOR FXD FILM - 6200 OHMS 1/2WATT +- 2% | M |
| 2 | | | 14 | S25 | Y12 | | C | 3010883 | 60 | RESISTOR FXD FILM - 3300 OHMS 1/2WATT +- 2% | M |
| 1 | | | 15 | T16 | | | C | 3010883 | 24 | RESISTOR FXD FILM - 100 OHMS 1/2WATT +- 2% | M |
| X | △ | | 16 | S16 | | | C | 3010883 | 32 | RESISTOR FXD FILM - 1502 OHMS 1/2WATT +- 2% | M |
| 2 | | | 17 | F25 | U25 | | C | 3010883 | 79 | RESISTOR FXD FILM - 13000 OHMS 1/2WATT +- 2% | M |
| 1 | | | 18 | V24 | | | C | 3010693 | 42 | RESISTOR FXD FILM - 560 OHMS 1WATT +- 5% | M |
| 2 | | | 19 | P21 | #16 | | C | 3010883 | 72 | RESISTOR FXD FILM - 10000 OHMS 1/2WATT +- 2% | M |
| 1 | | | 20 | E25 | | | C | 3010883 | 82 | RESISTOR FXD FILM - 27000 OHMS 1/2WATT +- 2% | M |
| 1 | | | 21 | U25 | | | C | 3010883 | 25 | RESISTOR FXD FILM - 120 OHMS 1/2WATT +- 2% | M |

DETACHED LIST OF MATERIAL

COMPONENT ASSY TYPE 8164

CLOCK, RDF & SPECIAL DRIVERS

UNIVAC

LM 5020185 REV L SHEET 4

ENG PROJ CODE 09 | UNIT OF MEASURE | DWG SIZE D

MFG PROJ CODE | LM CLASS A | DCL C

DEC. 12:67 LIST OF MATERIAL

| QTY PROD | MFG QTY | MFG U/M | FIND | REFERENCE DES A | B | C | CODE IDENT | IDENTIFICATION INFO PART OR IDENT NO DWG NO | DASH | NOMENCLATURE OR DESCRIPTION | D C I |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | 22 | M23 | | | C | 3010886 | 00 | RESISTOR FXD FILM - 270000 OHMS 1WATT +- 2% | M |
| 1 | | | 23 | L25 | | | C | 3010883 | 60 | RESISTOR FXD FILM - 5600 OHMS 1/2WATT +- 2% | M |
| X | △ | | 24 | K25 | | | C | 3010883 | 44 | RESISTOR FXD FILM - 1332 OHMS 1/2WATT +- 2% | M |
| 1 | | | 25 | X17 | | | C | 3010883 | 46 | RESISTOR FXD FILM - 820 OHMS 1/2WATT +- 2% | M |
| X3 | △ | | 26 | B16 | J1 | K25 | C | 3010883 | 88 | RESISTOR FXD FILM - 1000 OHMS 1/2WATT +- 2% | M |
| 2 | | | 27 | B9 | G1 | | C | 3010883 | 94 | RESISTOR FXD FILM - 82000 OHMS 1/2WATT +- 2% | M |
| X 3 | △ | | 28 | G8 | H9 | S16 | C | 3010883 | 52 | RESISTOR FXD FILM - 1500 OHMS 1/2WATT +- 2% | M |
| 1 | | | 29 | M1 | | | C | 3010883 | 71 | RESISTOR FXD FILM - 9100 OHMS 1/2WATT +- 2% | M |
| 1 | | | 30 | M17 | | | C | 3010883 | 78 | RESISTOR FXD FILM - 18000 OHMS 1/2WATT +- 2% | M |

DETACHED LIST OF MATERIAL

TITLE OF DRAWING FROM WHICH DETACHED: COMPONENT ASSY TYPE 8164

CLOCK, RDF & SPECIAL DRIVERS

UNIVAC

ENG PROJ CODE 09 | UNIT OF MEASURE: EACH | DWG SIZE D | MFG PROJ CODE | I M CLASS A | BCL C

DWG NO LM 5020185 | REV L | ISSUE NO 3 | SHEET 5

DEC, 12+67 LIST OF MATERIAL

| QTY PER ASSY | MFG QTY | MFG U/M | FIND NO | REFERENCE DES A | B | C | CODE IDENT | IDENTIFICATION INFO PART OR IDENT NO DWG NO | DASH | NOMENCLATURE OR DESCRIPTION | D C |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 3 | | | 31 | E13 | P17 | C5 | C | 3010883 | 61 | RESISTOR FXD FILM - 3600 OHMS 1/2#ATT +- 2% | M |
| 3 | | | 32 | L12 | M7 | T7 | C | 3010883 | 45 | RESISTOR FXD FILM - 750 OHMS 1/2#ATT +- 2% | M |
| 3 | | | 33 | P13 | K7 | R7 | C | 3010883 | 73 | RESISTOR FXD FILM - 11000 OHMS 1/2#ATT +- 2% | M |
| 3 | | | 34 | N15 | J7 | P-27 | C | 3010885 | 55 | RESISTOR FIXED FILM 2000 OHMS, 1 #ATT, +-2% | M |
| 2 | | | 35 | Z1 | Z7 | | C | 3010883 | 47 | RESISTOR FXD FILM - 910 OHMS 1/2#ATT +- 2% | M |
| 2 | | | 36 | R1 | A1 | | C | 3010883 | 76 | RESISTOR FXD FILM - 15000 OHMS 1/2#ATT +- 2% | M |
| 8 | | | 37 | U1 | V1 | E7 | C | 3010693 | 48 | RESISTOR FXD FILM - 1000 OHMS 1#ATT +- 5% | M |
| | | | | R X7 | J1 | F1 | 02 | | | | |
| | | | | R A10 | A17 | | 03 | | | | |
| 1 | | | 40 | Y15 | | | C | 2012122 | 24 | CAPACITOR, FXD, CER TUBULAR 10% 1000 PF | M |

FORM 24 ASSY REV 6-65

DETACHED LIST OF MATERIAL

TITLE OF DRAWING FROM WHICH DETACHED: COMPONENT ASSY TYPE 8164

CLOCK, RDF & SPECIAL DRIVERS

UNIVAC

ENG PROJ CODE 09 | UNIT OF MEASURE: EACH | DWG SIZE D | MFG PROJ CODE | I M CLASS A | BCL C

DWG NO LM 5020185 | REV L | ISSUE NO 3 | SHEET 7

DEC, 12+67 LIST OF MATERIAL

| QTY PER ASSY | MFG QTY | MFG U/M | FIND NO | REFERENCE DES A | B | C | CODE IDENT | IDENTIFICATION INFO PART OR IDENT NO DWG NO | DASH | NOMENCLATURE OR DESCRIPTION | D C |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | 52 | D16 | | | C | 2012105 | 84 | RESISTOR, FIXED FILM 825 OHMS 1/2 #ATT +- 1% | M |
| 1 | | | 53 | F16 | | | C | 2012106 | 71 | RESISTOR FIXED FILM 1/2 #ATT +- 1% 6650 OHMS | M |
| 1 | | | 54 | G15 | | | C | 2012105 | 61 | RESISTOR, FIXED FILM 475 OHMS 1/2 #ATT +- 1% | M |
| 2 | | | 55 | A25 | D25 | | C | 3006148 | 31 | COIL, RF - +- 5% 200 UH | M |
| 2 | | | 57 | Y1 | Y7 | | C | 3010883 | 69 | RESISTOR FXD FILM - 7500 OHMS 1/2#ATT +- 2% | M |
| | | | S01 | - - - | - - - | - - - | | | | 3500410 PRINTED CKT SPEC FOR ASSY 3F | M |
| | | | S02 | - - - | - - - | - - - | A | CS01985 | 00 | GENERAL 1004 TEST SPEC | C |
| | | | S03 | - - - | - - - | - - - | D | 5023553 | 00 | CIRCUIT PACKAGE TEST SHEET TYPE 8164 | C |
| | | | S04 | - - - | - - - | - - - | | 3500304 | | SOLDERING OF PRTD CKT BOARDS | M |
| | | | Z01 | - - - | - - - | - - - | | H 16d00 | 01 | L/M A PIC A REV HISTORY | |

FORM 24 ASSY REV 6-65

DETACHED LIST OF MATERIAL

TITLE OF DRAWING FROM WHICH DETACHED: COMPONENT ASSY TYPE 8164

CLOCK, RDF & SPECIAL DRIVERS

UNIVAC

ENG PROJ CODE 09 | UNIT OF MEASURE: EACH | DWG SIZE D | MFG PROJ CODE | I M CLASS A | BCL C

DWG NO LM 5020185 | REV L | ISSUE NO 3 | SHEET 6

DEC, 12+67 LIST OF MATERIAL

| QTY PER ASSY | MFG QTY | MFG U/M | FIND NO | REFERENCE DES A | B | C | CODE IDENT | IDENTIFICATION INFO PART OR IDENT NO DWG NO | DASH | NOMENCLATURE OR DESCRIPTION | D C |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | 41 | Z20 | | | A | 2012120 | 28 | CAPACITOR FXD PAPER DIELECTRIC .22 UF 100V +-10% | M |
| 3 | | | 42 | H24 | Q*R15 | B*C24 | C | 2012122 | 18 | CAPACITOR, FXD, CER TUBULAR 10% 330 PF | M * |
| 1 | | | 43 | D9 | | | C | 2012122 | 12 | CAPACITOR, FXD, CER TUBULAR 10% 100 PF | M |
| 3 | | | 44 | J13 | L7 | S7 | C | 2012122 | 15 | CAPACITOR, FXD, CER TUBULAR 10% 180 PF | M |
| 1 | | | 45 | B23 | | | A | 4912963 | 08 | RES, VAR WW .5#ATTS AT 250EG C 20000 OHMS | A |
| 1 | | | 46 | F8 | | | C | 3011838 | 17 | CHOKE, RADIO FREQUENCY 470 UH | M |
| 1 | | | 47 | B8 | | | A | 3004134 | 00 | HOLDER, CRYSTAL UNIT - PRINTED CKT MTG, BERYLLIUM CU CAD PL | M |
| 8 | | | 48 | - - - | - - - | - - - | C | 4000813 | 00 | STANDOFF, TRANSISTOR | A |
| 1 | | | 49 | - - - | - - - | - - - | A | 3010990 | 03 | EYELET, METALLIC - BRASS .156LG, .109 MAX GRIP | M |

FORM 24 ASSY REV 6-65

DETACHED LIST OF MATERIAL

TITLE OF DRAWING FROM WHICH DETACHED: COMPONENT ASSY TYPE 8164

CLOCK, RDF & SPECIAL DRIVERS

UNIVAC

ENG PROJ CODE 09 | UNIT OF MEASURE: EACH | DWG SIZE D | MFG PROJ CODE | I M CLASS A | BCL C

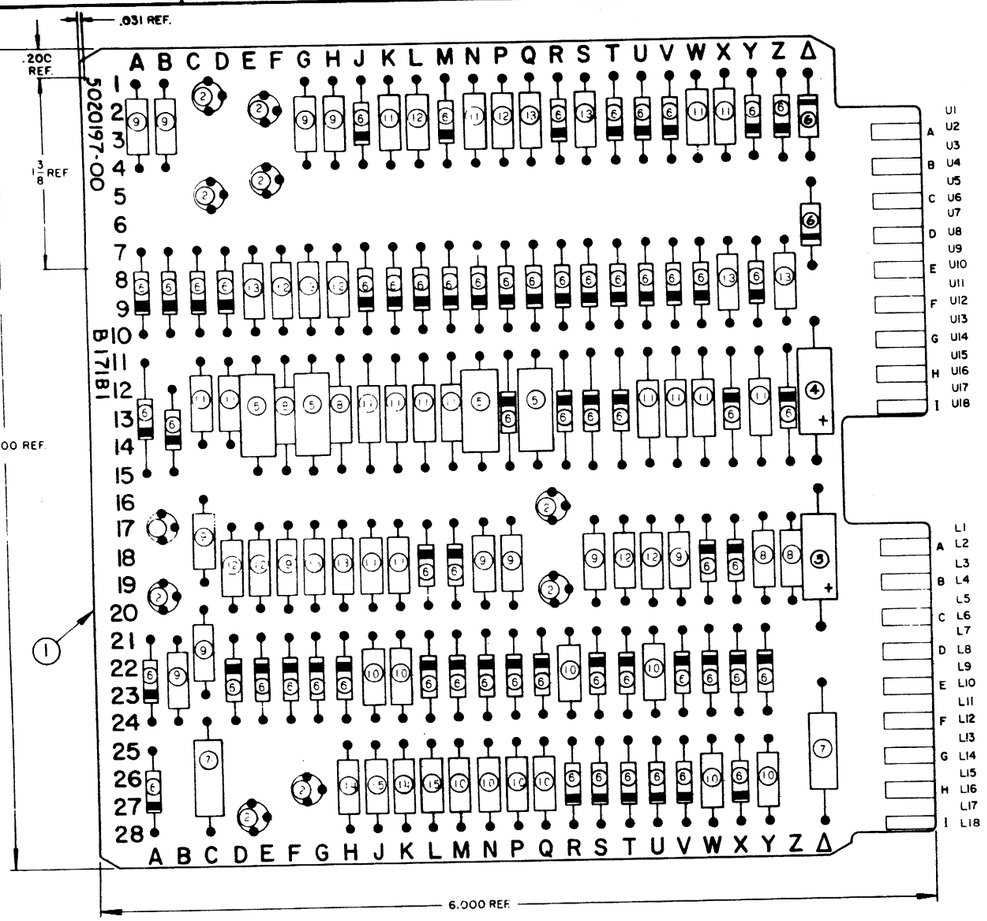
DWG NO LM 5020185 | REV L | ISSUE NO 3 | SHEET 8

DEC, 12+67 LIST OF MATERIAL

| QTY PER ASSY | MFG QTY | MFG U/M | FIND NO | REFERENCE DES A | B | C | CODE IDENT | IDENTIFICATION INFO PART OR IDENT NO DWG NO | DASH | NOMENCLATURE OR DESCRIPTION | D C |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Z02 | - - - | - - - | - - - | C | 7071 | 02 | L/M B PIC B REV HISTORY | |
| | | | Z03 | - - - | - - - | - - - | C | 7497 | 01 | L/M C PIC C REV HISTORY | |
| | | | Z04 | - - - | - - - | - - - | C | 7495 | 01 | L/M D PIC D REV HISTORY | |
| | | | Z05 | - - - | - - - | - - - | C | 7715 | 01 | L/M E PIC E REV HISTORY | |
| | | | Z06 | - - - | - - - | - - - | C | 7768 | 01 | L/M F PIC F REV HISTORY | |
| | | | Z07 | - - - | - - - | - - - | C | 9194 | 01 | L/M G PIC G REV HISTORY | |
| | | | Z08 | - - - | - - - | - - - | H | 16618 | 10 | L/M H PIC G REV HISTORY | |
| | | | Z09 | - - - | - - - | - - - | H | 18930 | 09 | L/M J PIC G REV HISTORY | |
| | | | Z10 | - - - | - - - | - - - | C | 9875 | 01 | L/M K PIC K REV HISTORY | |
| | | | Z11 | - - - | - - - | - - - | C | 10063 | 01 | L/M L PIC L REV HISTORY | |

SHEET 8 OF 8

FORM 24 ASSY REV 6-65




## NOTES:

1. STRIPE ON DIODE BODY DENOTES CATHODE END.
   ◯ INDICATES FIND NO.
   <> INDICATES DESIGNATIONS STAMPED ON COMPONENT FOR REF. ONLY.
   ( ) INDICATES DESIGNATIONS FOR REF. ONLY & SHALL NOT BE STAMPED.
2. UNLESS OTHERWISE DESIGNATED
   - CONTACT A SHALL BE ⏚
   - CONTACT B SHALL BE SPARE
   - CONTACT C SHALL BE → −8V
   - CONTACT D & E SHALL BE → −30V
   - CONTACT F SHALL BE → −CLAMP
   - CONTACT G SHALL BE → +20V
   - CONTACT H SHALL BE SPARE
   - CONTACT I SHALL BE ⏚
3. MINIMUM SPACE FOR THIS BOARD IS .500 INCH
4. ASSEMBLE PER (S01)
5. TEST PER (S02) (S03)
6. SOLDER PER (S04)

| REVISIONS | | | | | | |
|---|---|---|---|---|---|---|
| STATUS | ZONE | EIR | DESCRIPTION | BY | DATE | APPROVED |
| — | | HW-MSP | RELEASED | DN | 10-27-64 | D.O.N. |
| A | | C72155 | SEE EIR | DN | | DN |

FOR MATERIAL REQUIREMENTS SEE DETACHED LIST OF MATERIAL
LM 5020197
REVISION LETTER IN LWR RH CORNER APPLIES TO PICTORIAL SHT -S
LM REV LETTER CONTROLS DOCUMENT

| SHEET | 1 | 2 | 3 | |
|---|---|---|---|---|
| REV. | A | — | A | |
| CARD DESIGN LEVEL | B1718I | | | |

PART NO. 5020197-00

THIS DOCUMENT CONTAINS CONFIDENTIAL INFORMATION OF THE REMINGTON RAND DIVISION OF SPERRY RAND CORPORATION AND IS FURNISHED PURSUANT TO THE FOLLOWING INSTRUMENT
ON THE UNDERSTANDING THAT THIS DOCUMENT AND THE INFORMATION THEREON MAY NOT BE DEALT WITH IN ANY MANNER EXCEPT FOR THE PURPOSES OF THAT INSTRUMENT OR AS OTHERWISE PERMITTED IN WRITING BY THE REMINGTON RAND DIVISION OF SPERRY RAND CORPORATION

| | | |
|---|---|---|
| DO | 5020147-00 | TYPE 2202 |
| PT | NEXT ASSY | EQUIP |
| APPLICATION | | |

THREADS: EXT CL 2A INT CL 2B
MATERIAL
FINISH

| | | |
|---|---|---|
| DRAWN | E. YEAGER | 10-20-64 |
| ENGINEER | J.A. Yeager | 1-8-65 |
| ENGINEER | D.O.N. D. NEDDENRIEP | 1-28-65 |
| APPROVAL | | 1-28-65 |
| | | 1/28/65 |

LAST A

Remington Rand Univac
DIVISION OF SPERRY RAND CORPORATION

TITLE
COMPONENT ASSEMBLY
TYPE B171
MEMORY DATA REGISTER

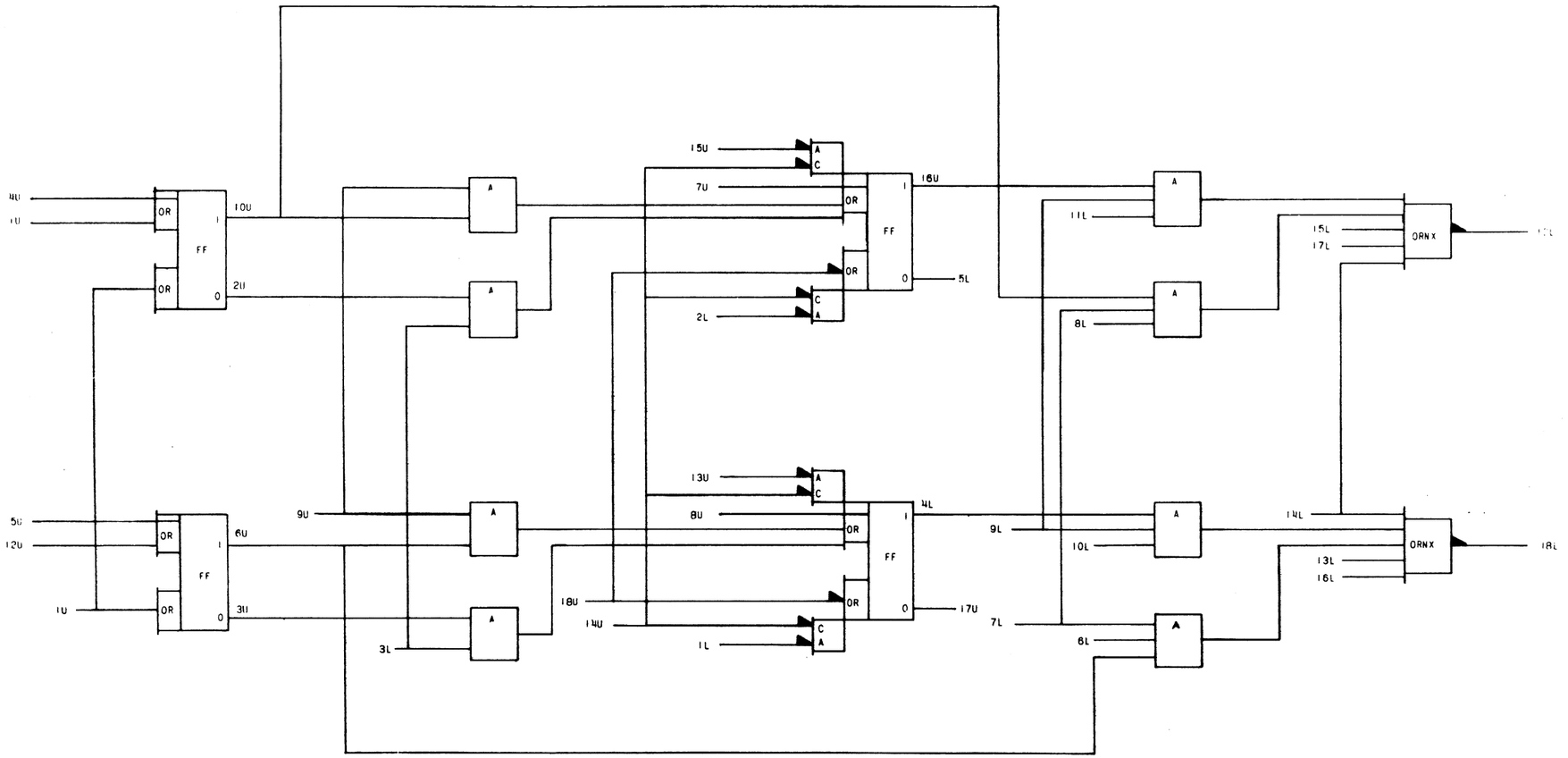
CODE IDENT NO. | SIZE D | DWG NO 5020197

SCALE 2:1 | SHEET 1 OF 3

DO NOT SCALE THIS PRINT

5020197

| REVISIONS | | | | | | |
|---|---|---|---|---|---|---|
| SYM | ZONE | ENG | DESCRIPTION | CHK | DATE | APPROVED |
| — | | 1160918-1 | RELEASED | | 1-28-65 | |




PART NO. SEE SHEET 1

~~IDENT NO.~~

THIS DOCUMENT CONTAINS CONFIDENTIAL INFORMATION OF THE UNIVAC DIVISION OF SPERRY RAND CORPORATION AND IS FURNISHED PURSUANT TO THE FOLLOWING INSTRUMENT.

ON THE UNDERSTANDING THAT THIS DOCUMENT AND THE INFORMATION THEREON MAY NOT BE DEALT WITH IN ANY MANNER EXCEPT FOR THE PURPOSES OF THAT INSTRUMENT OR AS OTHERWISE PERMITTED IN WRITING BY THE UNIVAC DIVISION OF SPERRY RAND CORPORATION.

SEE SHEET 1

NEXT ASSY | EQUIPMENT

APPLICATION

COMMODITY CODE

UNLESS OTHERWISE SPECIFIED
DIMENSIONS IN INCHES TOLERANCE ON
2 PLACE DECIMALS ± | 3 PLACE DECIMALS ± | ANGLES ±

HOLE DIAMETER TOLERANCE

| 0 THRU .250 | .251 THRU .500 | .501 & LARGER |
|---|---|---|
| + .003 | + .005 | + .010 |
| − .002 | − .003 | − .005 |

THREADS: EXT CL 2A, INT CL 2B

MATERIAL

FINISH

| | | |
|---|---|---|
| LAYOUT | E. YEAGER | 1-12-65 |
| DRAFTSMAN | J. A. Yourelle | 1-13-65 |
| CHECKER | | |
| ENGINEER | DON D. NEDDENRIEP | 1-28-65 |
| APPROVAL | | 1-28-65 |
| | | 2/10/65 |

CLASS A

UNIVAC
DIVISION OF SPERRY RAND CORPORATION

TITLE
COMPONENT ASSEMBLY
TYPE B171
MEMORY DATA REGISTER

CODE IDENT NO.

SIZE D

DWG NO. 5020197

SCALE

WEIGHT

SHEET 2 OF

DO NOT SCALE THIS PRINT

| QTY REQD | FIND | REF DES | CODE IDENT | DWG SIZE | PART OR IDENTIFYING NO | NOMENCLATURE OR DESCRIPTION |
|---|---|---|---|---|---|---|

LIST OF MATERIAL

DWG NO. 5020197 -

| SYM | ZONE | ECR | REVISIONS DESCRIPTION | CHK | DATE | APPROVED |
|---|---|---|---|---|---|---|
| — | | 67259 | RELEASED | | 1-28-65 | |
| A | | | SEE E/R | | | |

PART NO. SEE SHEET 1
IDENT. NO.

THIS DOCUMENT CONTAINS CONFIDENTIAL INFORMATION OF THE UNIVAC DIVISION OF SPERRY RAND CORPORATION AND IS FURNISHED PURSUANT TO THE FOLLOWING RESTRICTIVE NOTICE:

ON THE UNDERSTANDING THAT THIS DOCUMENT AND THE INFORMATION THEREIN WILL NOT BE DISCLOSED OR REPRODUCED WITHOUT THE PRIOR WRITTEN CONSENT OF, AND THAT IT WILL BE RETURNED UPON REQUEST TO, THE UNIVAC DIVISION OF SPERRY RAND CORP.

SEE SHEET 1
NEXT ASSY | EQUIPMENT
APPLICATION
COMMODITY CODE

UNLESS OTHERWISE SPECIFIED
DIMENSIONS IN INCHES TOLERANCE ON
2 PLACE DECIMALS ± — | 3 PLACE DECIMALS ± — | ANGLES ± —
HOLE DIAMETER TOLERANCE
0 THRU .250 +.003 −.002 | .251 THRU .500 +.005 −.003 | .501 & LARGER +.010 −.005
THREADS EXT CL 2A, INT CL 2B
MATERIAL
FINISH

| LAYOUT | DATE |
|---|---|
| O. SHERMAN | 10-20-64 |
| DRAFTSMAN J.A.Youtle | 1-18-65 |
| CHECKER | 1-26-65 |
| ENGINEER D.NEDDENRIEP | 1-28-65 |
| APPROVAL | 1-28-65 |
| | 2/10/65 |

CLASS A

UNIVAC
DIVISION OF SPERRY RAND CORPORATION

TITLE
COMPONENT ASSEMBLY
TYPE B171
MEMORY DATA REGISTER

CODE IDENT NO. —
SIZE D
DWG NO. 5020197

| QTY PLOD | FIND | REF DES | CODE IDENT | EMPG SIZE | PART OR IDENTIFYING NO. | NOMENCLATURE OR DESCRIPTION |
|---|---|---|---|---|---|---|

LIST OF MATERIAL

DWG NO. 5020197

DETACHED LIST OF MATERIAL

COMPONENT ASSY TYPE B 171

MEMORY DATA REGISTER

UNIVAC

DCT. 22:66

LM 5020197 B

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |

DETACHED LIST OF MATERIAL

COMPONENT ASSY TYPE B 171

MEMORY DATA REGISTER

UNIVAC

OCT. 22.65

LM 5020197

22 D

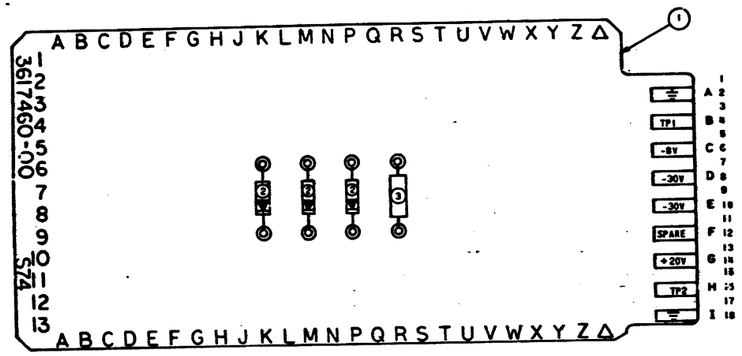
A C

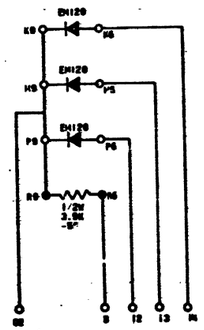
A 5

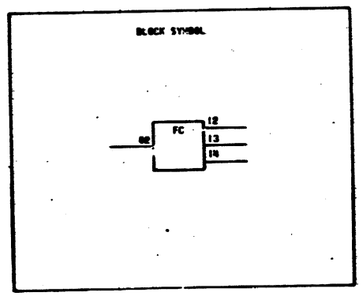
203 H 16062 07 L/R B PIC A REV HISTORY

M. Harley

| REVISIONS | | | | | | |
|---|---|---|---|---|---|---|
| ZONE | LTR | EIR | DESCRIPTION – FOR DETAILS SEE EIR | CHK | DATE | APPROVED |
| | - | HZ0394-1 | SPEC. PRE D. REL PT -00 | WJ | 4/24/69 | RF |
| | A | HZ0777-1 | SEE E.I.R. | WJ | 7/24/69 | [illegible] |




NOTES:

1. NO. OF CARD SPICES REQUIRED ONE (1)

| | | |
|---|---|---|
| 4 | TEST SPEC | (02) |
| 3 | ASSY SPEC | (02) |
| 2 | | |
| 1 | SOLDER SPEC | (01) |
| | REFERENCES | |

PART NO. 3617460-00

FOR MATL REQUIREMENTS SEE L/M, L/M REV. LETTER CONTROLS DOCUMENT

COMPANY CONFIDENTIAL INFORMATION
THIS DOCUMENT CONTAINS CONFIDENTIAL INFORMATION OF THE SPERRY RAND CORPORATION IN CONSIDERATION OF THE RECEIPT OF THIS DOCUMENT, THE RECIPIENT AGREES NOT TO REPRODUCE, COPY, USE OR TRANSMIT THIS DOCUMENT AND/OR THE INFORMATION THEREIN CONTAINED, IN WHOLE OR IN PART, OR TO SUFFER SUCH ACTION BY OTHERS, FOR ANY PURPOSE EXCEPT WITH THE WRITTEN PERMISSION, FIRST OBTAINED, OF SPERRY RAND CORPORATION, AND FURTHER AGREES TO SURRENDER SAME TO SPERRY RAND CORPORATION UPON DEMAND

| | | | |
|---|---|---|---|
| UNLESS OTHERWISE SPECIFIED | | | |
| DIMENSIONS IN INCHES TOL. ON 2 PLACE DECIMALS: - | 3 PLACE DECIMALS: - | ANGLES: - | |
| HOLE DIA. TOL. 0 THRU .250: - .003 - .002 | .251 THRU .500: + .005 - .003 | .501 AND LARGER: - .010 - .005 | |
| THREADS: EXT. CL 2A, INT CL 2B | | | |
| COMMODITY CODE | | | |

| | | |
|---|---|---|
| LAYOUT | C. WHITMAN | 4/10/69 |
| DRAFTSMAN | C. WHITMAN | 4/10/69 |
| CHECKER | [illegible] | 4/15/69 |
| ENGINEER | S. [illegible] | 4/28/69 |
| APPROVAL | [illegible] | 5/21/69 |
| | [illegible] | 4/5/69 |

UNIVAC
DIVISION OF SPERRY RAND CORPORATION

CLASS C

TITLE
COMPONENT ASSY
TYPE S74

| SIZE | CODE IDENT. NO. | DWG NO. |
|---|---|---|
| D | | 3617460 |

SCALE 2:1 | WEIGHT | SHEET 1 OF 1

A

UNIVAC

# PARTS LIST

| CODE IDENT | ISSUE DATE | CONTROL | CA | TYPE | COMM CODE | ST |
|---|---|---|---|---|---|---|
| 94209 | 07/24/69 | H 53 | | M | | A |

| PL | DWG NO | SHEET | PL REV |
|---|---|---|---|
| | 3617460 | 1 | A |

TITLE OF DRAWING FROM WHICH DETACHED

COMPONENT ASSEMBLY TYPE S74

| CA | U/M | | ENG SIZE | RANGE | SPEC | ISSUE | PIC REV |
|---|---|---|---|---|---|---|---|
| C | EA | 1 | D | 00 | 00 | 2 | A |

| FIND NO. | QUANTITY REQUIRED | U/M | > | PART OR IDEN NO DRAWING NO | DASH | NOMENCLATURE OR DESCRIPTION | S P | C C |
|---|---|---|---|---|---|---|---|---|
| 1 | 1 | EA | D | 3178077 | -00 | PRINTED WIRING BOARD | | |
| 2 | 3 | EA | C | 3010610 | -00 | SEMICONDUCTOR DEVICE DIODE GERMANIUM: EM 120 | | |
| 3 | 1 | EA | C | 3162267 | -76 | RESISTOR,FIXED,COMPOSITION- 3900 OHMS 1/2 WATT +-5% | | |
| S01 | | XX | | DS00304 | | SOLDERING OF PRTD CKT BOARDS | | |
| S02 | | XX | | HS02159 | | ASSY SPEC FOR MOD X PRTD. WIRING BOARDS | | |
| S03 | | X | A | SH04785 | -00 | COMPONENT ASSY S74 TEST SPEC | | |
| Z00 | | | | H 20341 | 01 | EIR HISTORY: EIR REV , PL REV -, PIC REV - | | |
| Z01 | | | | H 20777 | 01 | EIR HISTORY: EIR REV , PL REV A, PIC REV A | | |

Jo M. Dilley

USN 1817

# SERVICING DIAGRAM SECTION INDEX

| INDEX TITLE | INDEX NUMBER | |
|---|---|---|
| 9300 80 COL. ROW PUNCH TEST | BASIC TYPE NO. | INDEX VAR. NO. |
| | 92/9300 | 14 |
| TYPE NO. VARIATION USAGE | INDEX VAR. REV. | SHEET OF |
| | A | 1 1 |

| L/M | SHEET | DOCUMENT NUMBER | TITLE | DOCUMENT REVISION LEVEL 1 | 2 |
|---|---|---|---|---|---|
| | | SH-03752-00 | 9000 Series Row Punch Sub-Sys. | C | C |
| | | 3838000-27 | ROWP Program Deck * | A | A |
| | | 3841249-10 | ROSZ Program Deck * | - | - |
| | | SH04746-00 | 9000 Series Row Punch Sub-Sys. | - | - |
| | | 3B4646600 | PUTP Program Deck * | - | A |

* Documents not supplied by Central Records

| APPROVALS | | |
|---|---|---|
| FED DATE | MFG. ENG. DATE | DESIGN ENG. DATE |

UD4 - 5086 R1

UNIVAC
DIVISION OF SPERRY RAND CORPORATION

SPECIFICATION APPROVAL SHEET

SHEET 1

**TITLE**

9000 SERIES ROW PUNCH SUBSYSTEM, 80-COLUMN


COMPANY CONFIDENTIAL INFORMATION

THIS DOCUMENT CONTAINS CONFIDENTIAL INFORMATION OF THE SPERRY RAND CORPORATION. IN CONSIDERATION OF THE RECEIPT OF THIS DOCUMENT, THE RECIPIENT AGREES NOT TO REPRODUCE, COPY, USE OR TRANSMIT THIS DOCUMENT AND/OR THE INFORMATION THEREIN CONTAINED, IN WHOLE OR IN PART, OR TO SUFFER SUCH ACTION BY OTHERS, FOR ANY PURPOSE, EXCEPT WITH THE WRITTEN PERMISSION, FIRST OBTAINED, OF SPERRY RAND CORPORATION, AND FURTHER AGREES TO SURRENDER SAME TO SPERRY RAND CORPORATION UPON DEMAND.


SHEET INDEX

| SHEET | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| REV. | C | C | A | A | A | A | A | A | A | A | A | A | A | A | A | A | A | A | A | A | A | A | A | B | A | A | B | C |

| SHEET | 29 |
|---|---|
| REV. | C |

| SHEET | |
|---|---|
| REV. | |

*THE AUTHORIZED ISSUE OF THIS SPECIFICATION CONSISTS OF THE SHEET REVISIONS SHOWN IN THE SHEET INDEX SECTION ON THE LATEST ISSUE OF THIS APPROVAL SHEET.* ("-" IN REVISION SPACE DENOTES ORIGINAL ISSUE)

| ORIGINAL ISSUE | MONTH | DAY | YEAR | UNIVAC DIVISION OF SPERRY RAND CORPORATION |
|---|---|---|---|---|
| WRITTEN BY S. Martinez | 5 | 15 | 67 | |
| CHECKED BY | | | | SPECIFICATION TYPE: Test Specification |
| APPROVAL I. Yetter | 5 | 15 | 67 | |
| APPROVAL | | | | SPECIFICATION SYMBOL: SH03752 / CLASS: A / SPEC. REV.: C |
| APPROVAL | | | | |



UNIVAC
DIVISION OF SPERRY RAND CORPORATION

SPECIFICATION SHEET



SPECIFICATION SYMBOL
SH03752

80-COLUMN ROW PUNCH TEST SPECIFICATION INDEX


| DESCRIPTION | SECTION | SHEET |
|---|---|---|
| SCOPE | 1. | 3 |
| REFERENCES | 2. | 3 |
| ROW PUNCH FUNCTIONAL TEST (ROWP) | 3. | 3 |
| Purpose | 3.1 | 3 |
| Requirements | 3.2 | 3 |
| Description | 3.3 | 3 |
| Hardware Test Descriptions | 3.3.1 | 4 |
| Off-Line Test | 3.3.1.1 | 4 |
| TIO Tests | 3.3.1.2 | 4 |
| Jam Bad Parity Test | 3.3.1.3 | 4 |
| Invalid Command, Set Inhibit and Reset Inhibit Tests | 3.3.1.4 | 4 |
| Busy Test | 3.3.1.5 | 5 |
| Complete Buffer Test | 3.3.1.6 | 5 |
| Control Command Test | 3.3.1.7 | 5 |
| Select Stacker Test | 3.3.1.8 | 6 |
| Description of EXERCISER | 3.3.2 | 6 |
| Description of Feature Tests | 3.3.3 | 6 |
| Feed/Read Test (F/R) | 3.3.3.1 | 6 |
| Read/Punch Test (R/P) | 3.3.3.2 | 7 |
| Variable CPM Test | 3.3.3.3 | 7 |
| Card Score Inhibit Test | 3.3.3.4 | 7 |
| Post-Punch Read Option | 3.3.3.5 | 8 |
| Description of Data Patterns | 3.4 | 8 |
| Changing Data Pattern via Card Reader or Key-in | 3.4.1 | 8 |
| General Operating Instructions | 3.5 | 8 |
| Option Selection | 3.5.1 | 8 |
| Running the Program Under Preset Conditions | 3.5.2 | 9 |
| Running the Program With Option Selections | 3.5.3 | 9 |
| Description of Locations 20 thru 27 | 3.5.3.7 thru 3.5.3.15 | 11 |
| Hardware Tests Operating Instructions | 3.6 | 14 |
| Hardware Test Numbers | 3.5.3.13 | 14 |
| EXERCISER and Feature Tests Operating Instructions | 3.7 | 16 |
| Program Output | 3.8 | 16 |
| Program Test Entry Stops | 3.9 | 17 |
| Skip Comparison Errors | 3.10 | 17 |
| Stop List (ROWP) | 3.11 | 17 |
| ROW PUNCH SYSTEM TEST (ROSZ) | 4. | 28 |
| Purpose | 4.1 | 28 |
| Requirements | 4.2 | 28 |
| Description | 4.3 | 28 |
| Error Stops | 4.4 | 28 |
| Operating Instructions | 4.5, 3.5 | 28, 8 |

1. SCOPE

This specification describes the test programs for the 9000 series Row Punch Subsystem, type 0604, when used with the 9300 Computer.

2. REFERENCES

2.1 Product Description P-10044, 9200 System.

2.2 Product Description P-10056, 9000 Series Row Punch Subsystem - Type 0604.

2.3 Specification SH03601, 1001 Card Controller Test Programs.

2.4 Specification SH03081, System 9200 Test Programs.

3. FUNCTIONAL TEST (ROWP)

3.1 Purpose

This program tests the logic circuitry used by the instruction repertoire of the Row Punch and provides an EXERCISER for Manufacturing Quality Control (QC) for final test acceptance.

3.2 Requirements

9200/9300 Processor Type 3030-XX with I-O channel meeting SU00039 product specifications.
General Purpose Channel Feature - F0869-00,01
Card Reader
Type 0604 Row Punch Subsystem
8K Memory Size

3.3 Description

ROWP is divided into three parts identified as the Hardware tests, the EXERCISER, and the Feature tests. These tests check all hardware operations by executing the available row punch command repertoire.

Successful command execution is checked by testing the expected condition code indicator and doing data comparison where this is required. If the obtained results do not meet the program test requirements, a stop displaying an address will occur. This address display is listed in the Stop List, para. 3.11 to give the operator a guide to follow any stops that occur while testing the row punch.





3.3.1 HARDWARE TEST DESCRIPTIONS

The Hardware test section is divided into ten parts with corresponding test numbers. These test numbers are listed in paragraph 3.5.3.13. The hardware test operating instructions are listed in para. 3.6. The first test (off-line test) is used as an entry stop of the program. The ten divisions of Hardware Tests are as follows:

3.3.1.1 Off-Line Test

This test consists of executing a TIO (A5) instruction with the row punch off-line and testing for the expected condition code indicator, bit 0 and 1, for unit not available. If the expected condition code is not set, an address display will occur. The operator is to refer to the stop list (para. 3.11) to interpret any stop occurring after this address display. Successful completion of this test is display 6F03. Depressing START at this display, the program enters the TIO tests with address display 032E occurring if the unit is off-line at the 6F03 stop.

3.3.1.2 TIO Tests

These tests consist of executing an SIO (A4) instruction with 00 and 30 command codes followed by TIO (A5) instructions. If the expected condition code indicator for unit available is not set, an address display will occur. (Refer to para. 3.11). The test is repeated until the unit is available. Successful execution of this test is display 6F04 the entrance to Jam Bad Parity Test.

3.3.1.3 Jam Bad Parity Test

Data with bad parity is written (jammed) into a memory location found in the punch image area by means of the mode switches B and C in conjunction with the alter switch. This data is transmitted to the row punch by a load punch buffer command. Correct execution of this command is checked by testing the status and sense byte 1 bit settings for channel end, device end with unit check, and bus out check. Unexpected bit settings of status and sense byte 1 provide an error message listed in the Stop List (para. 3.11). The transmitted data is then unloaded and compared to guarantee that the data previous to the jammed bad parity is correct. A comparison error provides a 6FCE display format found in para. 3.11, page 24.

If bad parity is not jammed, the expected bit settings for status and sense bytes will not occur and stops 6F33 and 6333 (para. 3.11, pages 21,22) will occur requiring program restart procedures.

3.3.1.4 Invalid Command, Set Inhibit and Reset Inhibit Tests

These tests consist of giving the corresponding punch commands and testing for the necessary set or reset condition code indicators, status and sense byte 1 bits. Unexpected test conditions are presented with a

stop displaying an address listed under para. 3.11.

3.3.1.5 Busy Test

The test sequence consists of two loads, two control feed punches, or two control feed instructions followed by two unload instructions and data comparisons. Unexpected busy test error conditions present an address display while a data comparison error presents a 6FCE stop. The address displays are listed sequentially under para. 3.11. The stop 6FCE is found in para. 3.11, page 24.

3.3.1.6 Complete Buffer Test

3.3.1.6.1 The program is preset to do the following sequence of punch commands. An unload punch buffer command follows each punch instruction and the data is compared. If the unit has a Read/Punch option, set Bit 3 of location 24 to 1 at stop display OFFF. This allows a read check of blank cards.

| Punch Command | Output |
|---|---|
| Load Punch Buffer | No Card output, data comparison following unload command. |
| Load Punch Buffer, Feed Select Stacker | 162 blank cards selected with data comparison following unload command. |
| Load Punch Buffer, Feed Punch | One blank card followed by 159 punched cards with data comparisons following the unload command. |
| Load Punch Buffer, Feed Select Stacker | One punched card and 159 blank cards fed into the select stacker. Data comparisons follow the unload command. |
| Load Punch Buffer, Feed Punch | One blank card and 159 punched cards fed into regular stacker. Data comparisons follow the unload command. |

3.3.1.6.2 To change the sequence described above, select the repeat test option (bit 6, location 24 and test number location 25 at stop OFFF) and proceed as specified in stop list, para. 3.11 , page 22), Stop 6F05*.

3.3.1.7 Control Command Test

The punch buffer is loaded with a selected pattern and the following sequence of control commands are executed. The operator should check that the correct pattern has been punched out.





3.3.1.7 Control Command Test - continued . . .

| Control Command | Output |
|---|---|
| Feed Card, Select Stacker | 102 blank cards are fed into the select stacker. |
| Feed Card, Punch | 1 blank card and 99 punched cards are fed into the regular stacker. |
| Feed Card, Select Stacker | 1 punched card and 99 blank cards are selected. |
| Feed Card, Punch | 1 blank card and 99 punched cards are fed into the regular stacker. |

3.3.1.8 Select Stacker Test

This test executes 100 Start I-O instructions and alternates feeding a blank card into the selected stacker and a punched card into the regular stacker. Refer to Stop List, para. 3.11, to check any address displays.

3.3.2 DESCRIPTION OF EXERCISER

The EXERCISER provides a good continuous mechanical checkout of the row punch by using the maximum card per minute (CPM) punching rate. This option executes a feed card punch command and checks are made on channel and device end interrupt detection with further tests on error detection bit settings such as unit check and hole count errors. If a punch error occurs, sense byte 1 is tested to guarantee error detection performance. Address displays and other stops caused by any error detection are given in the stop list, para. 3.11, pages 26 and 27.

3.3.2.1 The EXERCISER does not come to an orderly completion stop. Once selected, this option requires operator intervention to stop. The punched card output depends on the pattern selection (para. 3.5.3.8 and 3.3.3.2.1) and is to be used as input to the Feed/Read, Read/Punch, Card Score Inhibit options, and Post-Punch Read option.

3.3.3 DESCRIPTION OF FEATURE TESTS

These tests are for three additional engineering features: Read/Punch feature #F0875-00; 250 CPM feature #F0945-00,01; and Card Score Inhibit feature #F1046-00,01. The test options available in this section are Feed/Read, Read/Punch, Variable CPM and Card Score Inhibit Test. Also included in this section is a Post-Punch Read option.

3.3.3.1 Feed/Read Test (F/R)

The F/R test sequence consists of reading a card into the read buffer, unloading the buffer and comparing the data. This test, using output from the EXERCISER, need only to have bit 0 selected in selection byte OPT or loc. 20 at stop OFFF as the pattern selection is already in loc. OPT+1, or loc. 21 at stop OFFF.

3.3.3.1 Feed/Read Test (F/R) - continued . . .

. . . Alternate methods for using the F/R test data selection are inserting the pattern into locations 20, 21, 22, 23, at stop OAAA (see para. 3.4.1.2) or selecting the reader option (bit 1 in OPT). No matter what method is used, sections on Select Options and Pattern Selection should be very helpful and self-explanatory.

3.3.3.2 Read/Punch Test (R/P)

The R/P test sequence consists of punching the upper 1/2 portion of a punched card. This punched card must be prepunched by using the EXERCISER (see 3.3.2 and 3.5). An unload read buffer command is executed and the first 1/2 of the card image is compared. A comparison error display occurs if any character is unloaded incorrectly (see compare error stop 6FCE; para. 3.11, page 24). If excessive compare errors occur, these errors may be skipped by following the procedure to skip comparison errors, para. 3.10.

3.3.3.2.1 The card input for the R/P option may be prepunched with the EXERCISER. At stop OFFF, insert the proper option bits in locations 21 and 22. Location 21 should specify bits to select one pattern and to punch less than a whole card, para. 3.5.3.8. The card column count must be written in location 22. This card column count must be equal to or less than 1/2 card (1 to $28_{16}$ for translate or 1 to $50_{16}$ for image).

In order to process the prepunched cards, the program (ROWP) must be restarted (para. 3.5.2.6) and the R/P bit selected in location 20, at stop OFFF. Locations 21 and 22 must remain the same as described in the above para.

3.3.3.3 Variable CPM Test

This test is a variation of the EXERCISER (refer to para. 3.3.2). Through the bit selection in memory in location 24 at stop OFFF, the card per minute rate can be varied or held at a constant rate. This variation allows the operator to increase or decrease the CPM rate, but whichever variation is first chosen, the program will execute this variation until a maximum or minimum limit is reached and then go in the opposite direction. At any time during program running, the operator has the option of holding the CPM rate constant by changing the bit selection in loc. 204. Loc. 24 bit description is given in para. 3.5.3.11.

3.3.3.4 Card Score Inhibit Test

This test uses the program common to the Feed/Read option. The Feed/Read option description is given under para. 3.3.3.1. and is to be used for the Card Score Inhibit test. Operator action is required in setting the card score inhibit switches with the corresponding bit selection in memory loc. 21 at initial stop OFFF. Three inhibit switch combinations (53, 54; 62, 63; and 68, 69) are programmed. Incorrect inhibit switch setting normally gives compare errors and display 6FCE; para. 3.11, page 24.





3.3.3.5 Post-Punch Read Option

This test option consists of control feeding prepunched cards and reading the post-punch read station into the punch buffer. An unload punch buffer command is executed and the data received is compared.

Comparison errors are handled identically as in the Read/Punch option, para. 3.3.3.2.

3.4 Description of Data Patterns

The data patterns provided by the program are the checkerboard patterns and the 1001 Card Controller test patterns (refer to specification SH03601, 1001 Card Controller Test Programs; Appendix A, section IX: Test Deck).

Pattern 1: 330C330C0C330C33
Pattern 2: 330C0C330C33330C
Pattern 3: 1926192626192619
Pattern 4: 1926261926191926

3.4.1 Changing Data Pattern Via Card Reader or Key-In

The program provides two methods for using data patterns other than the data provided by the program in para. 3.4: . . : Method 1, a card reader option which is program selected at stop OFFF; Method 2, a data pattern insertion which is program selected at stop OAAA. This stop occurs after initial stop OFFF. Use of either of these two methods over-rides any previous pattern selection in location 21 at stop OFFF (section 3.5.3.8).

3.4.1.1 Card Reader Option

This option is chosen by setting bit 1 in loc. 20 with other needed options, at stop OFFF. Depressing START brings the program to stop OBBB, where the input card pattern is placed in the card reader input hopper. Clear reader and feed 1 card. Depress START. The card will be read into memory and the program will continue using this new input data pattern. If card feed error occurs, depress stop, clear reader, feed 1 card and depress START.

3.4.1.2 Data Pattern Insertion

Stop OAAA occurs after stop OFFF; except when the card reader option has been selected. Write in memory locations 20, 21, 22, 23 the desired input pattern. Depress START to continue with the program.

3.5 General Operating Instructions

3.5.1 Option Selection

3.5.1.1 Option selection includes choosing one of the three main parts of the program (para. 3.3), pattern selection and other special test selections such as repeating only one specific test in the Hardware section.

3.5.1.2 Option selections are to be done at stop OFFF by key-ins of specified bit configurations in memory locations 20, 21, 22, 23, 24, 25. These locations are stored at the beginning of the program starting at tagged location OPT, memory location 200. The bit description of these memory locations appear in paragraphs 3.5.3.7 to 3.5.3.13. Paragraphs 3.5.2 and 3.5.3 provide sample outlines that should be followed.

3.5.2 Running the program under preset conditions.

3.5.2.1 After the program is loaded, OOEE is displayed.

3.5.2.2 Depress Clear and Start to enter ROWP program. The program stops displaying OFFF.

3.5.2.3 Locations 20 thru 27 are initialized as follows:

| LOCATION | USE |
|---|---|
| 20 | Bit 6 set to 1 to do the EXERCISER option (bits 0, 1, 2, 3, 4, 5, 7 are set to 0). |
| 21 | Bit 1 set to 1 to do 4 checkerboard patterns. |
| 22,23,24 | These locations are preset to 00. |
| 24 | Bit 5 is set 1 to skip the off-line test in the Hardware test option. |
| 26 | This location contains the BCW start address 58. |
| 27 | This location contains the device address 06. |

3.5.2.4 Depress Start. The program stops displaying OAAA. At this display, a pattern insertion is optional in loc. 20, 21, 22, 23, ( refer to para. 3.4.1.2)

3.5.2.5 Depress Start to continue with the program.

3.5.2.6 Program restart at any time is: Set the processor to one Instruction, depress Clear, set processor to Continuous mode, and depress START. The program returns to stop OFFF where the operator is to select options as described in the following paragraphs or continue with the options previously chosen.

3.5.3 Running the program with option selections.

3.5.3.1 After the program is loaded, OOEE is displayed.

3.5.3.2 Depress Clear and Start to enter ROWP program. The program stops displaying OFFF.





3.5.3.3 At this stop (OFFF), the operator is to initialize locations 20 thru 27 (usually locations 20 thru 25 require initializing if the device address is not changed) as follows:

| LOCATION | USE |
|---|---|
| 20 | Set bit 6 to 1 to do EXERCISER option (or see para 3.5.3.6) (Set only ONE of the option bits 0, 2, 3, 4, 5, or 6 as specified in para. 3.5.3.7. Bit 1 is set if the reader is used to read in a pattern). |
| 21 | Select pattern desired in para. 3.5.3.8.<br>EXAMPLE: Do NO. 3, 1001 pattern<br>Set bit 0 to 1 to select 1001 patterns.<br>Set bit 1 to 0 to do 1 pattern (set bits 4, 5 below).<br>Set bit 4 to 0 (the setting of bits 4, 5 determines the pattern number).<br>Set bit 5 to 1. |
| 22 | Set to 00 since bit 2 is 0 in loc. 21. That is, bit 2, in loc. 21 is 0 if punching a whole card. If bit 2 is set to 1, then insert hexadecimal card column count 01 to 9F |
| 23 | This location is unused. |
| 24,25 | Not needed for this selection. |
| 26,27 | Preset to 58, BCW address and 06, device address. |

3.5.3.4 Depress Start. The program stops displaying OAAA only if the reader option was was set (loc. 20, bit 1 at stop OFFF). At OAAA display, a pattern insertion is optional in locations 20, 21, 22, 23 (see para. 3.4.1.2). Inserting a pattern into locations 20, 21, 22, 23 overrides pattern selection in loc. 21 at OFFF stop.

If the reader option was selected, the program stops displaying OBBB. Refer to Card Reader Option, para. 3.4.1.1.

3.5.3.5 Depress Start to continue with the program.

3.5.3.6 At stop OFFF if bits 0, 2, 3, 4, 5, and 6 are set to 0 in loc. 20, the Hardware tests are entered (see para. 3.6). The procedure outlines starting at 3.5.3.2 thru 3.5.3.4 are to be used with the following addition if a test is to be repeated.

| LOCATION | USE |
|---|---|
| 24 | Set bit 5 to 1 to skip off-line test.<br>Set bit 5 to 0 to do off-line test.<br>Set bit 6 to 1 to repeat test no. XX to be inserted in loc. 25.<br>Set bit 6 to 0, do not repeat any hardware tests. |
| 25 | Insert test no. para. 3.5.3.13. |

3.5.3.7 Use memory location 20 at program start OFFF display to select OPTIONS. Location 20 bit description.

| BIT | VALUE 1=set 0-reset | OPTION (Use) |
|---|---|---|
| 0* | 1 | do Feed/Read option (used in the compare subroutine of System Test for stopping on errors. |
| 0 | 0 | do not do Feed/Read option. |
| 1 | 1 | use card reader option to feed in new pattern. |
| 1 | 0 | do not use card reader option. |
| 2* | 1 | do Post-Punch Read Option. |
| 2 | 0 | do not do Post-Punch Read Option. |
| 3* | 1 | do Read/Punch Option. |
| 3 | 0 | do not do R/P Option. |
| 4* | 1 | do Variable CPM Option. |
| 4 | 0 | do not do Variable CPM. |
| 5* | 1 | do Card Score Inhibit Option. |
| 5 | 0 | do not do Card Score Inhibit Option. |
| 6* | 1 | do Exerciser. |
| 6 | 0 | do Hardware Tests. |
| 7 | 0 | do Image mode. |
| 7 | 1 | do Translate mode. |

* Only one of these option bits should be set to 1 at one time. To enter the Hardware Tests, these six bits must be set to 00. While all bits in location 20 are available for ROWP program, the system test ROSY (para. 4) uses only bits 0, 3, 5, 6, 7.





3.5.3.8 Pattern Selection

Memory location 21 bit description at program stop OFFF display. This loc, is mainly used for pattern selection used by the program. If none of these patterns are desired, depress start to display OAAA where locs. 20, 21, 22, 23 may be used to manually insert a pattern, refer to 3.4.1.2.

| BIT | VALUE 1=set 0=reset | OPTION(Use) |
|---|---|---|
| 0 | 0 | do checkerboard patterns. |
| 0 | 1 | do 1001 patterns. |
| 1 | 0 | do 1 checkerboard or 1001 pattern (see bits 4 and 5 accordingly). |
| 1 | 1 | do 4 checkerboard or 1001 pattern. |
| 2 | 0 | do full column count. |
| 2 | 1 | punch less than whole card column count (initialize loc. 22 with values from 01 to 9F). |
| 3 | 0 | do EXERCISER without stopping on hole count errors. |
| 3 | 1 | do EXERCISER with stops on hole count errors. |
| 4,5 | 1,1 | do pattern 1 checkerboard or 1001. |
| 4,5 | 1,0 | do pattern 2 checkerboard or 1001. |
| 4,5 | 0,1 | do pattern 3 checkerboard or 1001. |
| 4,5 | 0,0 | do pattern 4 checkerboard or 1001. |
| 6,7 | 0,1 | do CARD SCORE INHIBIT columns 53, 54. |
| 6,7 | 1,0 | do CARD SCORE INHIBIT columns 62, 63. |
| 6,7 | 0,0 | do CARD SCORE INHIBIT columns 68, 69. |

3.5.3.9 Memory location 22 description at program stop OFFF display. Use this loc. to insert desired column count (01 to 9F) if bit 2 memory location 21 is set to 1 at program stop OFFF display.

3.5.3.10 Memory location 23 is unused at stop OFFF.

3.5.3.11 Memory location 24 description at program stop OFFF display. Initialize this location when doing the Hardware Test Option or the Variable CPM Option. Location 24 is stored in location 204 for use while the program is running.

3.5.3.11 continued... (Memory location 24 at stop OFFF display)

| BIT | VALUE 1=set 0=reset | OPTION (Use) |
|---|---|---|
| 0,1 | 1,1 | increase cpm rate and hold when max. rate is reached then do the decrease cpm rate. Continue this procedure until bits 0,1 are changed to 0,0. |
| 0,1 | 1,0 | decrease cpm rate and hold when a min. rate is reached, then do the increase cpm rate. Continue this procedure until bits 0,1 are changed to 0,0. |
| 0,1 | 0,0 | to hold cpm rate at a desired value. Initially set for maximum rate if program starts with bits 0,1 set to 00. |
| 2 | | not used. |
| 3 | 1 | R/P option available (use for complete buffer test section 3.3.1.6). |
| 4 | | not used. |
| 5 | 1 | skip OFF-LINE Hardware test. |
| 5 | 0 | do OFF-LINE Hardware test. |
| 6 | 1 | repeat Hardware Test XXXX (insert TEST number in loc. 25). |
| 6 | 0 | do not repeat Hardware Test XXXX. Continue with Hardware tests. |
| 7 | 1 | do Hardware tests (7 or 9, section 3.3.1.7 and 3.3.1.8) with inhibit status set. This option must be done with bit 6 set and the test number selected in loc. 25. |

3.5.3.12 Memory location 25 bit description at program stop OFFF display. This loc. is used to supply the test number (section 3.5.3.13) of a Hardware Test (loc. 20 bit 6 set of 0) if it is desired to loop on a particular test. Location 24 bit 6 must be set to 1 (repeat bit) for this option. After first selection this bit is available in location 0204.





3.5.3.13 HARDWARE TEST NUMBERS (Location 25 = 0000XXXX) where XXXX = test number

| TEST NUMBER [1] | USE |
|---|---|
| 00 | use for TIO tests. This includes the Off-Line test. |
| 01 | use to select insert bad parity test. |
| 02 | use to select invalid test. |
| 12 | use for set inhibit test. |
| 22 | use for reset inhibit test |
| 03 | use for Busy test. |
| 05 | use for complete buffer test (if R/P option is available and desired insert bit 3 in loc. 24 at OFFF stop display. If running, insert bit 3 in loc. 0204. |
| 06 | not for use at stop OFFF. use for unload test only after complete buffer test (5) has been selected. Available in loc. 205 while program is running. |
| 07 | use for Control test. |
| 09 | use for Select Stacker test. |
| NOTE: | To continue with program remove bit 6 (repeat bit) from loc. 204. |

3.5.3.14 Memory location 26 is used to specify the BCW start address. This location is preset to the value 58.

3.5.3.15 Memory location 27 is used to specify the device address. This location is preset to device address 06.

3.6 Hardware Tests Operating Instructions

3.6.1 Paragraph 3.5.3 of the General Operating Instructions must be read carefully and the necessary options initialized in order to run all Hardware Tests. The Hardware Test program section can be run after loading by changing location 20, bit 6 to 0 and changing loc. 21 to zero at stop OFFF. After this initial change, the only operator actions required are to put the punch off-line (if the OFF-LINE test is to be run), to follow the procedure for jamming bad parity in a displayed memory location for the Jam Bad Parity Test, and complete buffer test.

After these initial test procedures, the succeeding tests are executed sequentially in the order described in section 3.3.1. After the succeeding completion of the hardware Tests, the program enters the EXERCISER until the operator intervenes.

3.6.1.1 Another manner in which a Hardware Test can be selected is by using the repeat test option provided in para. 3.5.3.11 (bit 6) to 3.5.3.13 and following the procedure outlined in para. 3.5.3.6. This option requires to key-in a repeat bit and the test number and should be used whenever desired to test one particular test function. Operator intervention is required to enter the succeeding tests by removal of the repeat bit (loc. 204 while running) or do rerun procedures.

3.6.1.2 Paragraphs 3.6.2, 3.6.4, and 3.6.5 describe the operating procedures necessary for the Off-Line, Jam Bad Parity Tests, and the Complete Buffer Test. The remaining tests do not require key-ins while running and the initializing procedures described above are to be used and reference made to the test descriptions available starting in para. 3.3.1.

Error conditions including compare error (display 6FCE, page 24) that may occur while running ROWP program are found in the stop list, para. 3.11.

3.6.2 Off-Line Test

At display 6003, place punch OFF-LINE if this test is to be entered.
Depress START.
Display 6F03 will appear when test is done successfully. Operator is to place punch on-line at this display to continue with the TIO tests.
If off-line test is not performed correctly, address display 02D0 occurs (para. 3.11).
To repeat test CLEAR, START, and proceed to display 6003.
If START is depressed at 6F03 display with the row punch off-line, the first TIO test is executed and the address display 0326 will occur.
(Refer to Stop List, para. 3.11).
The program repeats this TIO test until the punch is put ON-LINE.

3.6.3 TIO Tests

Entrance to these tests is through display 6003 (see off-line test). The program enters the TIO tests immediately if the OFF-LINE test is not selected, otherwise entrance is after execution of the OFF-LINE test.

Successful execution of the TIO test is stop 6F04, entrance to Jam Parity Test 3.6.4. In correct performance of these tests provides an address display found in para. 3.11. The tests are repeated until the malfunction is corrected.

3.6.4 Jam Bad Parity Test

At stop 6F04, depress START to display the memory location in which bad parity is to be jammed.
Set up on the console address switches the above displayed memory address.
Depress Test Mode Switches C then B to the ON-position. The order is important.
Write desired data into displayed memory address by using the data entry switches and the alter data switch.



3.6.4 Continued... Jam Bad Parity Test

Place the Test Mode Switches B then C to the OFF-position (NOTE: after jamming bad parity, do not display data as a bad parity error will occur requiring program restart procedures).
Depress START to execute test.
Repeat test procedure is given under para. 3.5.3.6 or restart program under 3.5.2.6 operating instruction procedures.
Refer to description para. 3.3.1.3.

3.6.5 Complete Buffer Test

This test is described in para. 3.3.1.6 and is entered after execution of the Busy Test when running ROWP. Other wise, this test is to be selected with the repeat bit (bit 6) and test no. options available in loc. 24 and 25 stop OFFF (para. 3.5.3.11 to 3.5.3.13.) These options are available in locations 204 and 205 while the program is running. Running the complete buffer test with the repeat option set allows the operator to check out the channel by performing load and unload instruction without card feeds. This is accomplished by selection of this option causing the program to stop once displaying 6F05 on entering the complete buffer test. Read (Display) location 20 and initialize locations 21, 22, 23, 24 and 25 with the value available in location 20. This displayed value is good for either binary or translate data modes. Depress START to run buffer test.

3.6.5.1 To test the Read Buffer add the zero (0) bit to the value in locations 20 through 25. See also the stop list, para. 3.11 page 22.

3.6.5.2 The values in locations 21, 22, 23 and 24 can be used instead of the value in location 20 for testing feed commands (not for the Read Buffer). If no command changes are made, the program runs with the preset values to perform the test described in para. 3.3.1.6.

3.7 EXERCISER and Feature Tests Operating Instructions

The EXERCISER and the Feature Tests require proper use of paragraphs 3.5 through 3.5.3.13 for proper test initialization. The EXERCISER main requirement after initialization is a good supply of cards. The Feature Tests require the R/P output from the EXERCISER.

3.8 Program Output

3.8.1 Program punch card output is dependent upon the option selection. In general, the Hardware test option will feed punched cards into the regular stacker and blank cards into the select stacker. This output is described in sections 3.3.1.5 to section 3.3.1.8 according to the test being executed.

To help check the output per N commands executed, a blank card separates the punched cards while a punched card separates blank cards. N equals 160 for the complete buffer test, 100 for the control and select stacker test.

3.8.1 Continued...Program output

To increase this output, it is best to loop on one of these tests. This is done by inserting the repeat test, bit 6 location 204 and the test number 5, 7 or 9. Refer to paragraphs 3.3.1.5 to 3.3.1.8 for more detailed Hardware Test Program output.

3.9 Program Test Entry Stops

These are normal operating stops that are encountered while running ROWP. They appear in the stop list, para. 3.11 with an asterisk (*) for quick identification.

STOP USE

OFFF* Program initial stop. At this point options are to be chosen.
OAAA* This stop normally follows the OFFF stop and allows the operator to key-in a desired pattern.
OBBB* Occurs only when the card reader option is selected to read in a desired data pattern. See paragraph 3.4.1.1.
6003* Hardware test entry stop. Depress START to skip off-line test with unit on-line, or operator puts unit off-line and depresses START.
6F03* Off-line test has been completed. Put unit on-line.
6F04* Jam parity test entry. Depress START to display a memory location for jamming bad parity.
6F05* Complete Buffer Test entry when repeat bit and test number options are set.

3.10 Skip Comparison Errors:

If excessive compare errors occur, (compare error display 6FCE, page 24, has occurred), the operator may decide to skip comparison of any remaining data by depressing Operator Request.
This action allows the program to skip comparing the remaining data and to execute the next instruction.

3.11 STOP LIST (ROWP)

Whenever an error occurs, the processor will stop with an address display. The operator should refer to the list given below and follow the instructions given under the comment and action column.

To help the operator, the stop list provides the test name as they appear in the codedit. If a hardware test is in progress, check loc. 208 for the test number in progress (para. 3.5.3.13). The address displays are in sequential order with a few exceptions. These exceptions are displays that are commonly used throughout the program.
The stops that occur within an address display are defined as 60ST and 60DD. The six (6) is used only as a program identifier. ST means status; i.e., channel end, device end, unit check, etc. DD is used to represent the instruction command bits; i.e., 01, 05 load punch buffer, 86 unload punch buffer, etc. Other stops that occur throughout the program are identified under Program Test Entry Stops (paragraph 3.9).





3.11 STOP LIST - continued . . .

| ADDRESS DISPLAY | STOP | COMMENT & ACTION |
|---|---|---|
| | OFFF* | Entrance to ROWP program. Select options according to para. 3.5.1. |
| | OAAA* | Data pattern insertion. See para. 3.4.1.2. This stop occurs after OFFE stop. Depress run to enter program according to selected options. |
| 02A8 | | Check processor status. Expect to be in processor mode. I-O state set to 02A8. |
| | 6003* | Entrance to off-line test. This stop is found in loc. 02C0. |
| | OFF-LINE TEST | |
| 02D8 | | The following two conditions apply:<br>a. The punch unit is not off-line. Depress run to display status. Status is expected to be 00 (ST) below. Check the condition code in location 00 for unit available (00). Depress run to enter sense read routine. If a sense bit is set, sense format 64SS will occur (see address display 1034 thru stop 6401, page 25. Depress run to stop at 6003 to repeat test.<br>b. The punch unit is off-line. Depress run to display status. 00 status is expected. Check the condition code in loc. 00, unit unavailable (11) is expected. Continue with para. (a), depress run to enter sense read routine. |
| 02F2 | | Locations 42 and 43 not all ones during off-line test.<br>Depress run to repeat test. |
| 0304 | | Punch unit is off-line but the BCW loc. has changed. The BCW is equal to the value found in tagged loc. PHBW, 1A82.<br>The off-line test is not successfully completed until stop 6F03 occurs. |
| | 6F03* | End off-line test. Put punch on-line. This stop is found in loc. 0314. |

3.11 STOP LIST - CONTINUED...

| ADDRESS DISPLAY | STOP | COMMENT & ACTION |
|---|---|---|
| | | **TIO TESTS** |
| 0326 | | Doing A4 with 00 command (TIO) bits. This address is only displayed if unit is off-line after 6F03 or entering TIO tests with unit off-line, after stop 6003. Other wise an unexpected condition code indication stop setting has occurred. |
| | 6000 | Display 00 command bits. |
| | 60ST | Where ST is status. Depress Run to repeat test. If unit is off-line, place unit on-line to continue. |
| 034C | | Doing A4 with 30 command (TIO) bits. This stop occurs only if instruction is not accepted. |
| | 6030 | Display 30 command bits. |
| | 60ST | Where ST is status. Depress run to repeat test. |
| 0304 | | Occurs only if 60ST above did not occur and BCW was altered through a malfunction. |
| | | **JAM PARITY TEST** |
| | 6F04* | Entry to jam parity test. This stop is found in loc. 037C. Depress run to display address below. |
| 1ABA | | Enter bad parity in this location (para. 3.3.1.3 and 3.6.4). Depress start to continue. If bad parity is not detected program stops at 6F33 and 6333, pages 21 and 22. |
| 03BA | | Doing A4 (load) instruction with 05 or 01 command bits. Instruction was not accepted. |
| | 60DD | DD is 01 or 05, load punch buffer command bits. Channel clear, depress run to repeat load. |
| 03E6 | | Doing A4 (unload) instructions with 82 or 86 command bits. Instruction was not accepted. |
| | 60DD | DD is 82 or 86, unload punch buffer command bits. Channel clear, depress run to repeat unload. |
| | | Other stops that occur for jam parity are due to interrupt decoding and compare error. These stops are described under load and unload interrupt coding (address display 0814 page 22) and compare error 6FCE stop, page 24. |





3.11 STOP LIST - Continued . . .

| ADDRESS DISPLAY | STOP | COMMENT & ACTION |
|---|---|---|
| | | **INVALID FUNCTION CODE TEST** |
| 042E | | Doing A4 (invalid function code) instructions with 08 or 03 command bits. Status pending (01) condition code did not occur. Depress Start. |
| | 60DD | DD is 08 or 03 command bits. |
| | 60ST | ST is status. Depress run to repeat test. |
| | | **INVALID TEST INTERRUPT CODING DISPLAYS** |
| 047C | | Expected status pending (01) condition code did not occur. |
| | 6F40 | Condition code error has occurred. Depress start to display condition code. |
| | 60CC | CC is received condition code. |
| 0304 | | BCW changed during execution of invalid op code. |
| 049E | | Unit check not set for invalid op code. |
| | 60ST | Display status. Depress run to execute A5 to clear status. If status is not cleared, it is displayed below. |
| | 60ST | Status not clear. Depress run to enter sense read routine. Those stops are described under displayed address 1034 thru stop 6401, page 25. |
| | | **BUSY TEST** |
| 055A | | Doing two successive A4 (control feed) instructions and busy (10 condition code) is not set. |
| | 600B | 0B control feed command detail bits. |
| | 6F80 | Busy error. Depress run to enter Sense Read routine. The error stops for the Sense Read routine are listed under displayed address 1034 thru stop 6401, page 25. |
| 057A | | Expected busy status (50). Depress run to display status below. |
| | 60ST | Where ST is status. |
| 05BA | | Doing two successive A4 (load) with 01, 05, or 13 command code bits. Busy (10) condition code is not set. |

3.11 STOP LIST - Continued . . .

| ADDRESS DISPLAY | STOP | COMMENT & ACTION |
|---|---|---|
| | 60DD | DD is command code 01, 05, or 13. |
| | 6F80 | Busy error. Depress run to enter sense read routine. (See display address 1066 thru stop 6401), page 25. |
| 05F6 | | Doing two successive A4 (unload) with 82 or 86 command code bits. Busy (10) condition code is not set. |
| | 60DD | DD is 82 or 86 command code. |
| | 6F80 | Busy error. Depress run to enter sense read routine (see display address 1034 thru stop 6401). |
| | | Compare errors are described under stop 6FCE, page 24. |
| | 6F33 | No interrupt received if good parity is received during parity test. This stop is found in the codedit loc. 063E. |
| | | Depress run to continue. Stop 6333, page 24 , must follow 6F33 for parity test. |
| | SET OR RESET INHIBIT TEST | |
| 0680 | | Doing A4 (set or reset inhibit) with 10 or 20 command code detail bits. Expected condition code 00 not set. |
| | 60DD | DD is 10 or 20 command code detail bits for set or reset inhibit. Depress run to enter sense read routine (see display address 1066 thru stop 6401). |
| 06A0 | | Locations 42, 43, have changed from all ones. |
| | 6F42 | Display for condition occurring is display address 06A0. |
| | 60ST | Where ST is the contents of loc. 42. Manually check loc. 43 for all ones. |
| | | Depress run to enter sense read routine (see display address 1066 thru stop 6401), page 25. |
| | LOAD AND UNLOAD TEST | |
| 072A | | A4 buffer test. Instruction not accepted. Check tag locations. FTBW (1A06) or FIBW (1A0C), translate and image tables, for various commands tested if necessary. |



3.11 STOP LIST - Continued . . .

| ADDRESS DISPLAY | STOP | COMMENT & ACTION |
|---|---|---|
| | 60DD | DD are command bits available in FTBW or FIBW given in address display 072A. |
| | | Depress run to enter sense read subroutine (see display address 1066 through stop 6401), page 25. |
| | 6F05* | Key-in commands for either Punch or Read Buffer for buffer test in locations, 20, 21, 22, 23, 24, 25. The command in location 20 is good for the punch buffer. |
| | | To do the READ BUFFER, include the 0-bit. That is, if the command is an 05, make it an 85. Write this command in all six locations, 20, 21, 22, 23, 24, 25. |
| | | It is also possible to test both buffers by alternating the initialized commands at stop 6F05. Insert the command in loc. 20 and add the 0-bit for the next loc., etc. The commands can also be done in any order. If an error occurs, determine which buffer was being tested by looking in loc. tag LXIO+3 (071F). |
| | LOAD AND UNLOAD INTERRUPT STOPS | |
| 0814 | | Channel end status was not received. Depress run to display status. |
| | 60ST | ST is status received. Depress run to enter sense read routine (see display address 1034 thru stop 6401), page 25 Channel clear and depress run to continue. |
| | 6333 | Lost interrupt. This stop must occur after 6F33 if parity test is in progress. Restart by depressing run. This stop is found in codedit loc. 0850. |
| 089A | | Device end status was not received. Depress run to display status. |
| | UNLOAD ROUTINE | |
| 09F8 | | A4 (unload) instruction for buffer test not accepted. Depress run to display command bits of A4. |
| | 60DD | DD is command detail bits 82 or 86 for unloading the punch buffer and 02 or 06 for unloading the read buffer. Depress run to enter sense read routine (see address display 1066 thru stop 6401), page 25. |
| | CONTROL COMMAND TEST | |
| 0A4E | | A4 (reset inhibit) instruction prior to entering test, not accepted. |

3.11 STOP LIST - Continued . . .

| ADDRESS DISPLAY | STOP | COMMENT & ACTION |
|---|---|---|
| | 6020 | Display reset inhibit command bits. Command was not accepted. Depress run to repeat command. |
| OABE | | A4, load buffer for control test not accepted. |
| | 60DD | Display load buffer command bits (01 or 05). Depress run to enter sense read routine (see address display 1066 thru stop 6401), page 25. |
| OB00 | | A4, control command not accepted. These commands are available in CTFS (1A12) and CIFS (1A17) (translate and image tables). Depress run to display command. |
| | 60DD | DD is control command available in tables CTFS and CIFS given in display address OB00. Depress run. Refer to stop 0C90 which will occur. |
| | CONTROL INTERRUPT CODING STOPS | |
| OBF4 | | Channel end and Device end status not set. Depress run to display status. |
| | 60ST | ST is status received. |
| OC5C | | Error status set. Depress run to display status. |
| | 60ST | ST is status received. |
| OC90 | | Unit available not expected here. Check loc. OC63 in codedit for status. Depress run to enter sense read routine (address display 1066 thru stop 6401), page 25. |
| | POST-PUNCH READ OPTION | |
| OCC0 | | Doing A4 post-punch read, instruction not accepted. Depress run to display 608B. 8B is command detail bits for post-punch read. Depress run to check status. |
| | 608B | Display for post-punch read. |
| | 60ST | Where ST is status. Depress run to repeat test. |
| OCF8 | | Unit unavailable or unit check set for post-punch read. Depress run to display status. |
| | 60ST | ST is status for post-punch read. Depress run to enter sense read routine (see address display 1066 thru stop 6401), page 25. |
| OD2C | | Doing A4 (unload punch buffer) instruction for post-punch read option not accepted. Depress run to display command bits. |





3.11 STOP LIST - Continued . . .

| ADDRESS DISPLAY | STOP | COMMENT & ACTION |
|---|---|---|
| | 6086 | 86 is the unload punch buffer command bits. Depress run to repeat command. |
| OD54 | | Channel end, device end status not set. Depress run to display status. |
| | 60ST | ST is status received. Depress run to enter sense read routine (see address display 1066 thru 6401), page 25. |
| | 6FCE* | Compare error display. Unloaded data had been compared with an error in the comparison. This stop is found in loc. ODEC. Depress run to display the number of the character (Image:0, thru 9F; translate:0 thru 4F) that is in error. |
| | 00AA | Where AA is character number where the error occurred. Depress run to display expected character. |
| | 00BB | Where BB is expected character. Depress run to display read value. |
| | 00RR | Where RR is read or unloaded character. Depress run to continue checking data or skip comparison errors if desired (para. 3.10). |
| | SELECT STACKER TEST | |
| OEBA | | Unexpected status during reset or set inhibit on entering select stacker test. Depress run to display status. |
| | 60ST | ST is status. Depress run to re-enter test. |
| OF34 | | A4 (load buffer) prior to entering select stacker test not accepted. Depress run to display command bits. |
| | 60DD | Where DD = 01 or 05 for load buffer command. Depress run to reinitialize test. |
| OF72 | | A4 (feed, punch, select stacker) instruction not accepted. Depress run to display command bits. |
| | 6033 | Command bits for feed, punch and select stacker. Depress run to process status causing this stop. Refer to display address 0C90, page 23. |
| OFB4 | | A4 (control feed) instruction not accepted. Depress run to display command bits. |
| | 600B | Control feed command bits. Depress run to process status. Refer to display address 0C90, page 23. |

3.11 STOP LIST - continued . . .

| ADDRESS DISPLAY | STOP | COMMENTS AND ACTION |
|---|---|---|
| | OBBB* | This stop occurs only when the card reader option is selected to read in a desired data pattern (see para. 3.4.1.1). The operator is to clear the reader, feed a card and depress run to continue with the program. If a misfeed occurs, restart the program. |
| | SENSE | READ ROUTINE |
| 1034 | | A5 before entering set inhibit test or sense read routine. Depress run to display status. Status not expected. If the processor in Proc. Mode checks loc. 0 for the condition code. |
| | | If in I-O mode check loc. 10 for the condition code. |
| | 60ST | ST is status. Depress run to reissue A5 to clear status. |
| 1066 | | A4 (sense) instruction not accepted. Depress run to display sense command bits. |
| | 6004 | 04 is Sense command bit. Depress run to clear status and repeat sense command. |
| 109A | | A5 to clear sense status not accepted. Depress run to display status. |
| | 60ST | ST is sense instruction status. Depress run to reissue A5 to clear status. |
| 10AE | | Channel end and device end status for sense instruction not available. Depress run to display command bits. |
| | 6004 | 04 is sense command bits. Depress run to display status. |
| | 60ST | ST is received status for sense instruction. Depress run to repeat sense instruction. |
| 1140 | | Unexpected interrupt has occurred. Check state of processor. Restart is necessary. |

SENSE BYTE 1 DISPLAYS

Sense displays have the format 64SS. Six (6) is used as a stop identifier, four (4) is used to signify that this is a display resulting from a sense operation, and SS are the bits (0-7) corresponding to sense byte 1. These stops are found in the codedit starting at program loc. 114C.





3.11 STOP LIST ----- continued . . .

| ADDRESS DISPLAY | STOP | COMMENTS AND ACTION |
|---|---|---|
| | 6480 | Command reject. |
| | 6440 | Intervention required. |
| | 6420 | Bus out check. |
| | 6410 | Card jam. |
| | 6408 | Data check. |
| | 6404 | Data late. |
| | 6402 | Inhibit set. |
| | 6401 | Abnormal non-repeat. |

Depress run after any of these sense stops to continue to the next stop or continue with the selected option in progress.

EXERCISER

| | | |
|---|---|---|
| 12EA | | Wrong pattern selection. Depress run to restart. At stop OFFF, select one pattern option in loc. 21 (para. 3.5.3.8). This stop is common to all options selected through loc. 20 at stop OFFF. |
| 145E | | Tried to do an A4 but the instruction was not accepted. Depress run to display the command bits of the instruction. |
| | 60DD | DD is the command bits of the attempted A4. Depress run to display status. |
| | 60ST | ST is status display. These displays available in the Exerciser are common to the F/R, R/P, and CSI routines, address display 194C. Depress run to repeat command. |

EXERCISER INTERRUPT CODING

| | | |
|---|---|---|
| 149C | | Stop common to F/R, R/P, and CSI options, sect. 3.3.3. |
| | 6F58 | BCW has changed on one of the options in address display 149C. |
| 14DE | | Unexpected status. Program was expecting Channel end or Device end. Depress run to display status. |
| | 60ST | ST is unexpected status. Depress run to enter sense read routine (see address display 1066 thru stop 6401). |
| 1532 | | Unit check or hole count error has occurred. If hole count error, loc. 201 bit 2 is set to 1 to stop on hole count errors. Depress run to display status. |
| | 60ST | ST is status. Depress run to enter sense read routine (see address display 1066 thru stop 6401). |

3.11 STOP LIST - continued . . .

| ADDRESS DISPLAY | STOP | COMMENTS AND ACTION |
|---|---|---|
| 15A4 | | Status other than device end was received. Depress run to display received status. |
| | 60ST | ST is received status. Depress run to enter sense read routine (see address display 1066 thru stop 6401). |
| 1600 | | Unit check or hole count error has occurred. If hole count error: loc. 201, bit 3 is set to 1 to stop on hole count errors. Depress run to display status. |
| | 60ST | ST is status. Depress run to enter sense read routine (see address display 1066 thru stop 6401), page 25. |
| | F/R, R/P, and CSI CODING | |
| 16B8 | | A4 for F/R, R/P, or CSI routines not accepted. Depress run to display command bits. |
| | 600B | OB is command code for control feed. Depress run to repeat command. |
| 1704 | | A4 (unload read buffer) for F/R, R/P, or CSI routines not accepted. Depress run to display command bits. |
| | 60DD | DD is command bits 02 or 06 for unload read buffer. Depress run to repeat command. |
| | F/R, R/P, and CSI INTERRUPT CODING | |
| 17A0 | | Channel end and device end status not received. Depress run to display received status. |
| | 60ST | ST is status from A4 operation. Depress run to enter sense read routine (see address display 1066 thru stop 6401), page 25. |

*NOTE: These stops are summarized in paragraph 3.9.





4. Row Punch System Test (ROSZ)

4.1 Purpose

This program tests the capability of the 9300 computer system to handle concurrent processing when running various peripherals with the Row Punch Subsystem (type 0604).

4.2 Requirements

92/9300 Processor type 3030-XX with I-O channel meeting SH00039 product specifications
General Purpose Channel Feature - F0869-00,01
Type 0604 Row Punch Subsystem
8K Memory Size
Peripherals
System Test Programs (See Specification SH03081)

4.3 Description

4.3.1 This program consists of modified versions of the EXERCISER, the Feed/Read, and the Card Score Inhibit Tests available in ROWP program. Options and pattern selection are similar to ROWP. The only bit configuration that is available in OPT are 0, 3, 5, 6, and 7. Bit 0 is preset to 1 to stop on errors. This bit must be set to 0 to run without stopping on errors. Bit 3 is used to select the Feed/Read option instead of the Read/Punch option available in ROWP. Bits 5, 6, and 7 have the same use as in ROWP. Program initialization is thru locations 20, 21, 22, 23. Bit descriptions for locations 20, 21, 22, 23 for use at stop OFFF are found in paragraphs 3.5.3.7 to 3.5.3.10.

4.4 Error Stops

Error stops occurring in ROSZ are preceded by an OAnn stop. OA signifies that the error is from a program using the channel and nn is the device address. Following the OAnn stop only four other possible nn stops can occur. These stops are as follows:

6001: used to denote a compare error.
6003: used to denote that an SIO was rejected.
6004: used to denote an error interrupt.
6005: used to denote that an interrupt has not occurred.

4.4.1 All errors occurring while running ROSZ are binarily counted in ERCC 000A with an overflow counter in EROV. These counters are found in locations 000A to 000D relative to loc. 0000 which must be incremented by the base address of ROSY to obtain the absolute address (see Spec. SH03081).

4.5 Operating Instructions

Operating Instructions are found under System 9200 Test Programs, spec. SH03081. See para. 3.5 with special attention to para. 3.5.3.7. of this specification.

UNIVAC

SPECIFICATION REVISION RECORD

SHEET 29 REVISION C

SPECIFICATION SYMBOL
SI103752

| SPEC REV | EIR NO. | SHEET NO. | SHEET REV. | DESCRIPTION OF REVISION 'DESCRIBE REVISION IN ONE OF THE FOLLOWING 3 WAYS! 1. ADDED 2. DELETED 3. CHANGED FROM TO | CHG BY | CHCK | APPROVAL | DATE |
|---|---|---|---|---|---|---|---|---|
| - | H18386-4 | 1 THRU 17 | - | FINAL RELEASE OF SPECIFICATION. | L Pinque 5-28-68 | H Hanneyfelt 5-28-68 | L Cohen 6/5/68 | |
| A | H18386-23 | 1 THRU 29 | A | REVISED & RETYPED SHEETS 1 THRU 16, ADDED SHEETS 17 THRU 28, SHEET 29 WAS 17. | | | | 6-21-68 |
| B | H18386 | 1 | B | UPDATED SHEET INDEX REV. LEVEL. | | 9-12-68 | | |
| | | 24 | B | REVISED PARAGRAPH 3.11 } ERROR CORRECTION | | | | |
| | | 27 | B | REVISED PARAGRAPH 3.11 } | | | | |
| | | 29 | B | UPDATED REVISION. | | | | |
| C | H18386 | 1 | C | UPDATED REVISION. | L Pinque 10-21-68 | 10-30-68 | | 10-31-68 |
| | | 2 | C | TITLE FOR SECTION 40 - "ROSZ" WAS "ROSY". | | | | |
| | | 28 | C | PARA 4, 4.4 & 4.4.1 - "ROSZ" WAS "ROSY". | | | | |
| | | 29 | C | UPDATED REVISION. | | | | |

UNIVAC

SPECIFICATION APPROVAL SHEET

SHEET 1

**TITLE**

PUTP - PUNCH UTILITY PROGRAM


COMPANY CONFIDENTIAL INFORMATION

THIS DOCUMENT CONTAINS CONFIDENTIAL INFORMATION OF THE SPERRY RAND CORPORATION. IN CONSIDERATION OF THE RECEIPT OF THIS DOCUMENT, THE RECIPIENT AGREES NOT TO REPRODUCE, COPY, USE OR TRANSMIT THIS DOCUMENT AND/OR THE INFORMATION THEREIN CONTAINED, IN WHOLE OR IN PART, OR TO SUFFER SUCH ACTION BY OTHERS, FOR ANY PURPOSE, EXCEPT WITH THE WRITTEN PERMISSION, FIRST OBTAINED, OF SPERRY RAND CORPORATION, AND FURTHER AGREES TO SURRENDER SAME TO SPERRY RAND CORPORATION UPON DEMAND.


SHEET INDEX

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SHEET | 1 | 2 | 3 | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| REV. | - | - | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SHEET | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| REV. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SHEET | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| REV. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

*THE AUTHORIZED ISSUE OF THIS SPECIFICATION CONSISTS OF THE SHEET REVISIONS SHOWN IN THE SHEET INDEX SECTION ON THE LATEST ISSUE OF THIS APPROVAL SHEET.* ("-" IN REVISION SPACE DENOTES ORIGINAL ISSUE)

| ORIGINAL ISSUE | MONTH | DAY | YEAR | UNIVAC |
|---|---|---|---|---|
| WRITTEN BY D. Oliver | 4 | 8 | 69 | |
| CHECKED BY | | | | SPECIFICATION TYPE |
| APPROVAL R. C. Goldblatt | 4 | 8 | 69 | Test Specification |
| APPROVAL | | | | SPECIFICATION SYMBOL: S1104746 — CLASS: A — SPEC. REV.: - |
| APPROVAL | | | | |



UNIVAC

SPECIFICATION SHEET

SHEET 2 — REVISION -

SPECIFICATION SYMBOL S1104746

1. SCOPE

This document describes a utility program which supplies punched card outputs in four different formats. They are to be used as input for the various card reader test programs.

2. APPLICABLE DOCUMENTS

2.1 P-10044, 9200 System.

2.2 P-10055, 9300 System.

2.3 P-10056, 9000 Series Row Punch Subsystem, Type 0604.

2.4 S1103081, 9200 Test Program Description and Operating Procedures.

2.5 S1103601, U1001 Test Programs for 92/9300 Systems.

2.6 S1104162, 600 CPM Reader Subsystem, 92/9300 Computer.

3. GENERAL

By means of entries in option locations, this program will punch card decks on either the on-line punch or a Row Punch, Type 0604 connected to a GP channel of a 92/9300 computer. The card formats punched are the various test formats used for the on-line Reader and Read-Punch, the 1001 Card Controller, and the Free Standing Reader, Type 0711-05/06.

4. OPERATING INSTRUCTIONS

4.1 Purpose

This program punches the various card patterns used for testing the various 9000 series card input devices.

4.2 Requirements

This program requires an 8K memory and either an Internal Punch, or a Row Punch connected to a GP channel.

4.3 Description

Once a selection of data format has been made, the program will run continuously until stopped.

4.4 Operating Instructions

After the program has been loaded, it will come to the stop display 0077. The following options can then be selected:

| LOCATION | BIT | MEANING |
|---|---|---|
| 0300 | 0 | Use Internal Punch |
| | 1 | Use Row Punch |
| | 2 | Not used |
| | 3 | Not used |
| | 4 | Punch GP Channel Reader Cards |
| | 5 | Punch 1001 Cards |
| | 6 | Punch Internal Reader Cards |
| | 7 | Punch Image Mode Cards |
| 0303 | | Device Address only if Row Punch is used. |

4.5 Error Messages:

The error format is as follows:

NNss

where NN = Unique Configuration
ss = Sense or Status Byte displayed

GENERAL

| UNIQUE CONFIGURATION | MEANING |
|---|---|
| OFss | Wrong Configuration Selected: Configuration Selected Is Displayed In Second Byte. |

Type 603 Internal Punch

| | |
|---|---|
| 02ss | Status condition for error after punch completion. |
| 12ss | Status condition following XIOF Reject. |

Type 0604 Row Punch

| | |
|---|---|
| 0Ass | Status condition for error after punch completion. |
| 1Ass | Status condition following select stacker command. |
| 2Ass | Status condition following XIOF Reject. |
| 3Ass | Status condition for error following sense command. |
| 4Ass | Display of sense byte 1. |





DATE: 5-27-59

APPROVAL: P. D. Smith

CHCK: [illegible] 5-29-59

CHG BY: [illegible]

DESCRIPTION OF REVISION
(DESCRIBE REVISION IN ONE OF THE FOLLOWING 3 WAYS)
1. ADDED _____ 2. DELETED _____ 3. CHANGED FROM _____ TO _____

RELEASED IDENT. NO. -00

| SHEET NO. | SHEET REV. | EIR NO. | SPEC REV |
|---|---|---|---|
| 1 THRU 4 | - | HI8386-85 | - |